An approach to segmenting wine consumers for the Villa Oeiras brand for the United States market

Maréva Valayer

Dissertation to obtain the degree of

European Master of Science in Viticulture and Enology

Supervisor: Professor Francisco Ramos Lopes Gomes da Silva

Advisor: Dr. Andrew Thoeni

Jury members

President: Jorge Manuel Rodrigues Ricardo da Silva (Phd), Full Professor, at Instituto Superior de Agronomia, Universidade de Lisboa

Members: Luca Rossetto (Phd), Professor at Universitá degli Studi di Padova;

Francisco Ramos Lopes Gomes da Silva (Phd), Assistant Professor at Instituto Superior de Agronomia, Universidade de Lisboa;

Maria Alexandra Campos Seabra Pinto Invited Assistant Professor at Instituto Superior de Agronomia, Universidade de Lisboa.

2017

Acknowledgements

I would like to thank my supervisor Professor Francisco Ramos Lopes Gomes da Silva for his guidance throughout the entire thesis, availability, and encouragements.

I would to thank Dr. Andrew Thoeni for his interest in my topic which lead to helping me with creating my surveys, sharing his insights, and giving me criticisms on my work.

I would like to thank Professor Manuela Neves for her availability, helping me with using the R software, and checking my results.

Finally, I would like to thank Professor Jorge Manuel Rodrigues Ricardo da Silva for coordinating the opportunity to do this master's thesis talong with helping me find my supervisor.

Abstract

Adega do Casal Manteiga is a publicly owned winery that has recently experienced an increase in demand for their Carcavelos fortified white wine. From this demand, the company wants to expand their market to the United States. Due to the lack of knowledge of their demographics, two surveys were created. One aimed towards a public that is familiar with their product and one towards the U.S. citizens. MCA was used on the results to create segments. Even though the significance of the results is low due to the number of participants, a potential market was identified. The most suitable market for the Villa Oeiras brand has the following characteristics. They are either male or female, aged from late 20's to mid 30's. They have obtained at least a bachelor's degree and have a minimum household income of 35 000$ per year. Their status tends to be either married or living with a significant other. They are frequent wine drinkers and occasionally consume fortified wines. They are enthusiastic about any wine related activity.

Keywords: Fortified wine, Carcavelos, Consumption, MCA, United States

Resumo

Adega do casal Manteiga é uma adega pertencente ao Estado, que verificou recentemente um aumento na procura do seu vinho generoso de Carcavelos. Tendo isso em consideração, a empresa pretende expandir a sua oferta para o mercado Norte-americano. Para ultrapassar a escassez de informação relativa os perfis demográficos dos seus consumidores foram estruturados dois inquéritos. O primeiro dirigido a um público que está familiarizado com o vinho em questão, o outro dirigido a cidadãos dos Estado Unidos da América. Foi utilizada a Análise de Componentes Principais com o objetivo de identificar segmentos de mercado. Apesar da significância dos resultados não ser muito elevada devido à reduzida dimensão da amostra inquirida, foi possível caraterizar um mercado potencial. O mercado mais apropriado para o Vila Oeiras tem as seguintes caraterísticas. É constituído tanto por homens como por mulheres, com idades entre os vinte e trinta anos, que detêm pelo menos o grau de licenciados e um rendimento familiar de, pelo menos 35 000 $ por ano. São casados ou vivem com algum parceiro, são consumidores frequentes de vinho e consomem ocasionalmente vinho generoso. São entusiastas acerca de quaisquer assuntos relacionados com a atividade vitivinícola.

Palavras-chave: Vinho generoso, Carcavelos, Consumo, ACP, Estados Unidos da América

Resumo estendido

A Adega do Casal Manteiga é uma adega pública, pertencente à Camara Municipal de Oeiras. Esta adega produz um tipo de vinho branco fortificado, sob a denominação de origem Carcavelos, cuja marca comercial é Villa Oeiras. A empresa é associada da Viniportugal desde 2016 e, desde então, tem verificado um aumento nas suas vendas, tanto nacionais como internacionais. O aumento da procura faz com que a empresa pondere expandir o seu mercado para os Estados Unidos da América.

Os vinhos fortificados representam cerca de 8% do mercado Norte-americano e, devido à escassez de conhecimento sobre este tipo de vinho, tanto por parte dos vendedores como dos consumidores, é um produto difícil de vender. Para além disso, é também desconhecido, por parte da empresa produtora, o perfil demográfico dos seus consumidores. Sabendo que os Estados Unidos são um mercado vasto e fragmentado, é crucial para a empresa o estudo deste mercado, bem como a análise dos consumidores de vinho fortificado, de forma a ter sucesso no lançamento da sua marca nos EUA. Devido à escassez de estudos e de amostragens sobre os consumidores americanos de vinhos fortificados, este estudo visa efetuar uma primeira aproximação ao conhecimento sobre a segmentação do mercado americano de vinhos fortificados, de modo a avaliar a existência de potenciais compradores da marca Villa Oeiras. Na sequência da revisão bibliográfica efetuada, foram concebidos e aplicados dois inquéritos: um deles foi dirigido a um público familiarizado com a marca Villa Oeiras, e o outro dirigido a cidadãos norte-americanos. O primeiro obteve 49 respostas válidas e o segundo obteve 41. Os dados recolhidos foram tratados com recurso à Análise de Correspondência Múltipla, com o objetivo de criar uma segmentação.

Apesar de a significância dos resultados ser reduzida devido ao número de participantes, foi possível identificar um mercado potencial. O mercado mais adequado para este vinho tem as seguintes caraterísticas: é indiferente em relação ao género, pertencem essencialmente à "geração Millennial" e têm idades desde os 20 anos até aos trinta e muitos. Têm um nível de formação elevado, pelo menos equivalente à licenciatura, e têm um rendimento familiar de moderado a elevado, no mínimo de 35 000 $ por ano. O seu estado civil oscila entre "casados" ou "união de facto". São consumidores habituais de vinho e ocasionais de vinhos fortificados. São entusiastas em relação a qualquer atividade relacionada com vinhos.

Os vinhos fortificados de Carcavelos possuem um potencial interessante para terem sucesso num eventual lançamento nos Estados Unidos, uma vez que o mercado para vinhos

portugueses fortificados está a crescer. Para além disso, e à medida que os Millennials abaixo de 21 anos vão ficando mais velhos, mais vão aumentando os segmentos dos consumidores frequentes e entusiastas. Adicionalmente, etnias como os hispânicos, que preferem vinhos de sobremesa, encontram-se em crescimento rápido, o que contribui par o aumento dos segmentos em causa. Contudo, os vinhos fortificados representarem um mercado de reduzida dimensão e são vinhos difíceis de vender. Isto significa que é muito importante que a empresa desenvolva e aprofunde a análise sobre o perfil demográfico dos seus consumidores, e que foque o seu marketing no nicho definido. Para a além disso os Millennials são intensos utilizadores de tecnologia, o que torna essencial que a marca Villa Oeiras passe a marcar presença na internet, com um website ativo e atualizado, bem como com uma página nas redes sociais. A empresa deverá utilizar esta plataforma para contar a sua história única, divulgar as castas autóctones que utiliza bem como o processo de fabrico do seu vinho. Será igualmente benéfico criar a possibilidade de se efetuarem compras online. A empresa deveria também considerar a possibilidade de colocar as suas garrafas em lojas da especialidade, pois é nestas que os consumidores entusiastas normalmente adquirem o vinho que consomem. Assim, e enquanto a empresa desenvolve análises complementares sobre o perfil demográfico dos consumidores dos Estados Unidos, deveriam reforçar a presença da marca no mercado nacional e nas plataformas sociais.

Palavras-chave: Vinho fortificado, Carcavelos, Consumo, ACM, Estados Unidos

Table of Contents

List of figures

List of tables

List of annexes

List of abbreviations

Bn	Billion
CGAVAD	Companhia Geral da Agricultura das Vinhas do Alto Douro
DOC	Denomination of Origin Controlled
DOP	Denomination of Origin Protected
Hl	Hectoliter
IGP	Indication of Geography Protected
Kha	Thousands of hectares
MCA	Multiple Correspondence Analysis
Mhl	Millions of hectoliters
Mm	Millimeters
OIV	International Organization of Vine and Wine
SWOT	Strengths, Weaknesses, Opportunities, and Threats

1. Bibliographic report

1.1. Introduction

Wine consumption worldwide was on the rise with a 10% increase from 2000 to 2008 (from 226 mhl to 250 mhl). After the 2008 economic crisis, from 2009 to 2015, the worldwide consumption has been stagnant with a slight decrease of -3,7% (from 250 mhl to 241 mhl) (OIV, 2017). Even though consumers aren't drinking as much wine as they used to, the international wine trade has been growing since 2000. There was a rise in volume by 73% (from 60 mhl to 104 mhl) and in value by 142% (from 12 billion euros to 29 billion euros) (OIV, 2017).

The United States is one of the top wine trade markets. They are the number one importer in value, and third in volume (OIV, 2017). Since 2011, they have become the most prominent wine consumers due to an increase of 2,5% in domestic demands since 2015, an uprise of new wine consumers, growth in income and a change in eating habits.

The United States imports 1,7% of Portuguese wines which puts Portugal in the 9th position. From the total of Portuguese wine exported to the United States, 21% are fortified wines. From 2011 to 2015, the export of Portuguese fortified wines to the United States has been rising, especially in value. The volume increased by 2,96% (from 35.666 hL to 36.722 hL) and the profit raised by 22,8% (from 25.902 million euros to 31.807 million euros) (Wines of Portugal, 2017c). It is expected to have a 41% growth in value in the United States market from 2014 to 2017 (ViniPortugal, 2017).

ViniPortugal, a Portuguese private and non-profit association, has a significant part in exporting Portuguese wines into the United States. Their goal is to promote and support Portuguese wine production and image on a national and international level through the Wines of Portugal brand. They invest annually 7 million euros in events, promotion, education, training, and communication. From that budget, 703 thousand euros goes into international festivals (e.g. Prowein, London International Wine Fair, and Vinexpo) and 41% goes into promoting Portuguese wines in the United States and Brazil. In 2012, they invested 2.5 million euros in the United States market (ViniPortugal, 2017).

Adega do Casal Manteiga is a publicly owned winery by the Oeiras municipality and is the only Carcavelos fortified wine producer in the world. Since the winery have been in partnership with ViniPortugal in 2016, their brand, Villa Oeiras, has been more present on the market which lead to an increase in demand. For this reason, the winery wants to expand their sales internationally. One of their market aims is the United States. Even though that market has a high growth and opportunity potential, to be successful, it is essential to find the niches for the Villa Oeiras brand. The aim of this paper is to identify the demographics for the winery's fortified wine so that when exported to the United States, it has a higher chance to launch successfully. To do so, surveys were conducted, and searches for bibliographies on fortified wine consumption and trends in the United States were done.

The structure of this paper starts with a presentation of Portugal's wine regions, Lisboa's appellations, followed by the history of Carcavelos fortified wine production. Then there is an overview of winery's terroir, vineyard and fortified white wine production along with its product review and a SWOT of the company. Afterwards, there are bibliographic reviews on the market and trends for wines and fortified wine in the United States along with trends of Portugal's fortified wine exported into the United States. After the presentation of the material and methodology, the results of the surveys are analyzed by using Multiple Correspondence Analysis. The potential segments found are analyzed and discussed. This study concludes on a potential suitable market in the United States for the Villa Oeiras brand along with perspectives to extend this study.

1.2. Portugal’s wine regions

Portugal is a small country, but it has a wide diversity of climatic regions, grape varieties, and wine production.

Climate

The northern regions are temperate, with cool areas at higher elevations and warm to temperate-warm areas at lower elevations. The mainland has a Mediterranean climate with warm dry summers and mild wet fall-winters. The southern regions are in the warm (coastline) to very-warm climate (inland) (Fraga et al., 2017).

The northern coastal areas have subhumid to humid climates with a precipitation capacity to be over 1,000 mm per year due to the Atlantic influences. The rest of the country has a moderate dryness, but certain inland regions suffer from low water availability in the summer (400 ml/year) (Clark, 1995; Fraga et al., 2017).

Varieties and vine area

One of Portugal’s strength resides in the vast diversity of its indigenous grape varieties. There are over 300 authorized varieties. The most common ones are Aragonez (red), Touriga-Franca (red), Castelão (red), Fernao-Pires (white) and Touriga-Nacional (red) (Fraga et al., 2017).

According to the OIV, it is predicted that in 2016 there will be 195 kha of vineyard spread across the country, including its islands. Due to the replacements of vines with building (OIV, 2017), the vine area decreased by -16 % since 2013 (227 kha). This decline is mostly present in the DOC vineyards of the Lisboa region (Bucelas, Colares, and Carcavelos) due to the pressures of expanding urban population and their location qualities.

Wine regions, production, and consumption

The country has divided its vineyards into 14 wine regions. Most of them have one DOC while the Lisboa region has 9 DOCs. In total, there is 29 DOC spread across the country (table 1).

Table 1: Portugal’s wine regions and appellations

Wine regions	DOC appellations
Vinho Verde	Vinho verde
Tras-os-Montes	Tras-os-Montes
Porto and Douro	Douro/Porto
Tavora and Varosa	Tavora – Varosa
Dao and Lafoes	Doa, Lafoes
Bairrada	Bairrada
Beira Interior	Beira interior
Lisboa	Encostas de Aires, Obidos, Alenquer, Arruda, Torres Vedras, Lourinha, Bucelas, Carcavelos, and Colares
Tejo	Tejo
Peninsula de Setubal	Setubal and Palmela
Alentejo	Alentejo
Algarve	Lagos, Porimao, Lagoa, and Tavira
Madeira	Madeira
Acores	Gradosa, Biscoitos, and Pico

In 2016, Portugal produced a little over 7 mhl of wine which makes them the 11th biggest wine producer in the world (IVV, 2017c; OIV, 2017). Even though production has slightly decreased since 2000 (around 6.7 mhl), the country is overall in a stable situation (IVV, 2017c).

The population’s wine consumption is around 4.7 mhl which is below the production level. The overproduction is exported which places Portugal as the 9th biggest wine exporter in the world (OIV, 2017). In 2016, Portugal’s top European export countries were France (382.109 hl), Spain (228.705 hl), and Germany (214.030 hl) while the top non-European export countries were the USA (187.586 hl), Angola (169.088 hl), and Brazil (116.679 hl) (IVV, 2017b).

1.2.1. Lisboa’s appellations

Climate

Lisboa wine region is situated North-West of Lisbon and occupies 150 km of the western coast. It benefits from the Atlantic influence bringing sufficient precipitation levels with warm dry summers and mild wet falls-winters (Fraga, 2017).

Appellations and varieties

Lisboa has the most DOC appellations which produce an extensive range of wines. It has 8 appellations for wine production which are Encostas de Aires, Obidos, Torres Vedras, Alenquer, Arruda, Colares, Carcavelos, and Bucelas. It also has one appellation for brandy production named Lourinha. The grape varieties used are mostly indigenous. The primary traditional white grapes are Arinto, Fernão Pires, Malvasia, Seara-Nova, and Vital. The primary red grapes are Alicante Bouschet, Aragonez, Castelão, Tinta Miúda, Touriga Franca, Touriga Nacional, and Trincadeira (Wines of Portugal, 2017c).

Production

Lisboa wine region mostly produces table wines followed by IGP wines and DOP wines. The production is on a slow decline going from 1.3 mhl in 2000 to a predicted 990 thousand hl in 2017 (IVV, 2017c). Most of the vineyards are being removed from the areas closest to the capital (Bucelas, Colares, and Carcavelos) due to the expansion of the urban population.

1.2.2. History of Carcavelos DOC fortified wine

The history of Carcavelos wine production started in the 18th century when the Marquis of Pombal, Sebastiao Jose de Carvalho e Melo, owned vineyards on his estate in Oeiras. Sebastiao Jose de Carvalho e Melo (1699-1782) was an autocratic prime minister in the 18th century, and he is known to have transformed the socio-economic structure of Portugal. His main exploits are switching the censorship power from the Church to the State, reforming higher education by improving the teachings of science, enacting a legislation to free all the slaves living in the city, forming the first association that creates wine appellations (Companhia Geral da Agricultura das Vinhas do Alto Douro), and helping rebuild Lisbon after the devastating earthquake of 1755 (Larousse).

The Marquis of Pombal started creating Carcavelos wine because he wanted to use his grapes on his estate. Before producing his wine, he first started selling his grapes to the producers in the Douro which violated the regulations created by his association; Companhia Geral da Agricultura das Vinhas do Alto Douro (CGAVAD). Then he created his own regulations and permitted Carcavelos wines to be blended with port wines (Robinson and Harding, 2015). It is in the 19th century that he established Carcavelos as a winemaking region when he produced a world renowned fortified wine on his land in Oeiras. His wine was known as “Lisbon wine” or “Calcavella” (Terras de Portugal, 2017). He won multiple medals, and his wine was the most exported to the United Kingdom. Soon after, in 1908, Carcavelos was demarcated as Regiao Demarcada (the early DOC system). Unfortunately, in the 20th century, vineyards rapidly declined in number due to the real estate development in the suburbs of Lisbon. By the 21st

century, a very small amount of wine was being produced in the Carcavelos appellation. The region was left with only 10 ha of vines, remaining mostly from Pombal’s estate along with two other independent vineyards.

A research project was created around rebuilding the vineyard and producing the traditional Carcavelos fortified wine. This project brought together the municipality of Oeiras and the National Agronomic Station to invest into the winery and the vineyard of what was left from Pombal’s estate in 1997 (Mendes, 2016). In 2001, the Adega do Casal Manteiga winery was set up and produced 3.500 liters of Carcavelos wine. The wine was first branded under Count of Oeiras, but then it was changed to Villa Oeiras in 2014 (Mendes, 2016; Municipio de Oeiras, 2014). In April of 2009, a Confraternity of the Carcavelos wine was created to promote the appellation. Their goal is to work with the municipality to help produce and promote the historic wine legacy of the Marquis de Pombal along with saving the indigenous grapes of Carcavelos. To further support the history of Carcavelos, the Confraternity constructed the Museum of vine and Carcavelos wine (Terras de Portugal, 2017).

The municipality’s primary goal is to preserve the history of the Carcavelos fortified wine. They achieve this by preserving and expanding the existing vineyard, maintaining and recovering the cellar, maintaining the production of the fortified wine, and promoting its sales through oenotourism (Municipio de Oeiras, 2014).

As of today, Carcavelos has a total of 25 ha of vineyard shared between 4 owners. It is the smallest appellation of the country (Mendes, 2016).

1.3. Adega do Casal Manteiga overview

Adega do Casal Manteiga is a public winery owned by the municipality of Oeiras, and they produce only one type of wine which is a fortified white wine with the DOC Carcavelos appellation. The winery, cellar, and vineyard are located in Oeiras which is on the southern tip of the Lisboa wine region. The winery and the vineyard are on top of a hill within the National Agronomy station. The cellar is at the bottom of the hill within the property of the Palace of the Marquis de Pombal.

1.3.1. Terroir

The Denomination of Origin of Carcavelos is a micro region surrounded by small hills and is parallel to the coast (IVV, 1994). The area produces fresh and acidic wines (Mendes, 2016).

The winery and vineyard are located on the coast of the Atlantic Ocean by the river mouth of Tagus. This location has a temperate Mediterranean climate but without major temperature fluctuation due to the nearby waters. According to the Villa Oeiras website, the average winter temperatures are 11,6°C and the average summer temperatures are 23,2°C. These temperatures show that the vines don't normally stop its photosynthesis and they aren't at risk of winter or spring frost. There is humidity that settles in the vineyard at night but, the morning north dry wind and the south oriented vineyard prevents the vines and grapes from being attacked by moisture related diseases (Mendes, 2016). The average annual precipitation is 850 mm and the summers have an average lower than 5,2 mm. There is sufficient rainfall, but the vines are at risk of hydric stress in the summers. Though, the soil is composed of sandy, clay, and limestone (Gladstones, 2012; IVV, 1994; Mendes, 2016; Terras de Portugal, 2017). Sandy soils are dry, free, and light. The water can easily circulate as well as the roots (Gladstones, 2012). The roots can go deep into the soil to search for water when necessary. Clay has a good water retaining capacity which is very beneficial during vintages with dry summers. The soil has a reddish brown color (IVV, 1994).

1.3.2. Vineyard

Adega do Casal Manteiga possesses 12,5 ha of vines and plans on expanding in the nearby future. The vineyard is composed of red and white varieties. The red varieties are Castelão, Trincadeira, and Amostrinha. They are only used for experimental purposes towards the creation of new products. The white varieties are Galego Dourado, Arinto, and Ratinho. They are used to produce their fortified white wine.

Galego Dourado is the most essential variety to produce Carcavelos fortified wine. The variety originates from Carcavelos and Colares, and it generates high alcohol, rounded, full bodied, and aromatic wines (IVV, 2011b; Robinson et al., 2012).

Arinto is one of the oldest indigenous grape varieties and is traditionally used in the Bucelas appellation. Due to its excellent adaptability to different terrains and climates, it was planted in most of Portugal's wine regions and received multiple synonyms (e.g. Arinto de Bucelas, Cercial, Arinto d'Anadia, Arinto Galego, Arintho, Azal Espanhol, Chapeludo, Pedernã, and Terrantez da Terceira in Acores). This grape produces acidic wines with discrete notes of green apple and lemon. Arinto based wines will have freshness, minerality, and structure. It has a good aging potential as it will gain elegance and complexity (Robinson and al., 2012; Wines of Portugal, 2017ab).

Ratinho originates from the Carcavelos region and is used for the traditional Carcavelos wine production. It also received multiple synonyms (e.g. Boal Ratinho, Branco sem Nome, Malvasia de Tomar, Boal Doce, and Boal Ratinho) (Robinson et al., 2012). It produces medium alcohol content wines with low acidity (IVV, 2011b).

To respect the Carcavelos appellation, the vines must be conducted in cordon or in guyot. The first wire must not be higher than 60 cm above the soil. The planting density should be at least 3.300 vines/ha. The maximum yield can't exceed 55 hl/ha (IVV, 1994).

1.3.3. Carcavelos fortified white wine production

Adega do Casal Manteiga produces 50.000 bottles of fortified white wine every year. The winery has four full time employees and they hire an external company during the harvest season.

Carcavelos fortified wine process

Harvest is usually between the end of August and mid-September. The grapes are picked manually, put onto a selecting table, go through a destemmer, crusher and, are put into a pneumatic press where the solids are separated from the liquid. The must is put into stainless steel tanks to start the alcoholic fermentation. A few days after the start of the fermentation, when the sugar level is still high, a brandy of 77% vol. is added. The timing of the brandy addition is similar to Port and Madeira production. The winemaker uses a brandy from a distillery in Lourinha.

Aging process

The now fortified wine is put into new oak barrels for aging. To have the Carcavelos appellation, the barrel aging process must be for a minimum of 2 years, but the winemaker chooses to age it from 7 to 15 years. The winery uses French and Portuguese oak barrels with either a medium or a high toast. Due to the winery wanting to create the same product every year, they use this variation of barrels to produce batches of different aromas and structure. It allows the winemaker to have more options when blending to obtain the final wanted product.

Bottling

Once the barrels are chosen for the blend, the fortified wine is moved into the tanks. After oenological analysis, corrections are made if needed. Acidity is corrected with tartaric acid and the alcohol content is adjusted by adding brandy. It is mandatory for the appellation, that before bottling, the analytical characteristics are as followed (IVV, 1994):

- The total alcoholic strength by volume should be at a minimum of 17,5% vol.;
- The actual alcoholic strength by volume should be between 15 % vol. and 22% vol.;
- The residual sugar content can't be over 150 g/l;
- The total SO_2 is equal to 100 mg/l.

Once the fortified wine is in norm and there is a demand for it, a bottling company is called upon. Before it is commercialized, there must be a minimum of 6 months of bottle aging due to the appellation criteria.

1.3.4. Product review

The Villa Oeiras' fortified wine has a golden yellow color. It has a high aromatic intensity in which one can sense the aromas of nuts, honey, and spices. The palate is semi sweet, delicate, and rich with a long ending. It can be drunk as an aperitif or a digestive. It should be drunk fresh and pairs well with cured or semi cured cheeses, egg based meals, and nut based desserts.

The winery sells their brand in wine stores, restaurants, bars, and hotels. The retail price is 30€ for a 75cl bottle which means that the value/volume is 40€/L. When compared to other fortified wines produced in Portugal, the product is overpriced. The only fortified wines that are close to the same price range are Vintage port and Colheita port (table 2).

Table 2: Portuguese fortified wine value/volume in 2016

Fortified wine categories	Price in €/L
White port	5,49
Tawny port	3,76
Ruby port	4,35
Rosé port	5,43
Vintage port	28,26
Late Bottled Vintage port	8,65
Colheita port	24,92
Aged port	14,95
Reserve port	5,54
Tawny Reserve port	8,10
Crusted port	10,41
Moscatel white	3,09

Source: IVDP, 2017

The winery has been putting their fortified wine into tasting competitions, and they have been winning gold and silver medals since 2012. Even though the fortified wine is of good quality, it lacks reputation towards the public due to the lack of marketing. The company found a solution by partnering with ViniPortugal, a Portuguese private and non-profit association that promotes and supports Portuguese wine production and image, nationally, and internationally. Since the partnership agreement done in 2016, their fortified wine has been more present on the market which lead to an increase in sales nationally and internationally (Spain, England, and Brazil). This reputation boost led the company to want to expand their sales abroad. One of their market goals is the United States.

1.3.5. SWOT

SWOT is an acronym for strengths, weaknesses, opportunities, and threats. It is an analysis tool used for companies to determine strategic options towards a set goal. It is important to do such analysis to find beneficial aspects that can be utilized and aspects that can be improved to be more successful.

Adega do Casal Manteiga wants to market their Villa Oeiras brand to the United States. Being a diverse country with plenty of opportunities, it is essential to make their product standout. The company should focus on utilizing the originality of their product and target the appropriate public. The SWOT tool will be used to find the best aspects of the company and their product to utilize for a successful launch into the United States.

Table 3: SWOT of Adega do Casal Manteiga

Strengths	**Weaknesses**
- Unique product and history - Only producer of Carcavelos fortified wines - Have the Carcavelos appellation - Have won medals - Support from ViniPortugal	- Lack of knowledge from the public of the appellation and the brand - No range; produce one product - High value/volume compared to other Portuguese fortified wines - Lack of sales and demographics report - Publicly owned winery
Opportunities	**Threats**
- Promote with ViniPortugal - Increase in demand and production - Increase viewing of the brand - Expand their market	- Competition with other fortified wines or similar products on the market - Very vast and fragmented market - Target market limitation due to not having a range

Strengths

Adega do Casal Manteiga produces a unique product. They are the only Carcavelos fortified wine producers in the world and they are the only winery with the Carcavelos appellation. They also have an original historical story and have been winning medals since 2012.

The company has a product with a potential to standout and they should utilize all of the strengths for marketing purposes. The company also benefits from the ViniPortugal partnership as they invest in promoting Portuguese wines in the U.S. market.

Weaknesses

Lisboa wine region and the appellation of Carcavelos are unfamiliar to the wine consumers nationally and internationally. When a wine region or appellation is unknown, it can negatively impact sales as customers don’t tend to buy unfamiliar products. The company should boost their advertisement and viewing of their brand along with choosing an effective strategy to market their product to the potential clients.

The winery doesn’t have a range of different wines as they produce only one type of product which limits their sales to a specific niche. Yet, the company isn’t aware of their customers’ profile nor where are the best placements for their product which can lead to making wrong marketing choices and decrease sales. The company can’t successfully market their product if they don’t know their customers, especially at an international level, so they should prioritize creating a clientele list so they can analyze and identify the niche, and apply the appropriate marketing tactics.

When comparing the cost of their product with other Portuguese fortified wines it is overpriced. Once the company identifies its market target, they should reevaluate the cost of their product. They have many possible options; fit the cost with the price range from the market targeted, lower the price to be competitive with other similar products, or explain the reasoning behind such a price (e.g. certification, harvest by hand, appellation).

The winery is publicly owned which causes to have more procedures to make decisions and to take actions. It also leads to having employees that have no experience in working in the vineyard and the winery. The new employees are not put through training before working in the company which leads to inefficiency in the work field. All of these factors are due to poor management.

Opportunities

The winery has great opportunities thanks to their strengths. The partnership with ViniPortugal influenced the increase in demand for Villa Oeiras. They helped promote the brand nationally and internationally through wine salons and festivals, and with exporting and marketing the product. The company should continue utilizing the benefits from the association to increase the demand which would lead to an increase in sales and in production.

If the company has a successful launch in the U.S. market, they could have a great potential to raise awareness to the Lisboa wine region, the Carcavelos appellation, and their brand. They would also have a potential to raise demand, sales, and notoriety which can lead to expanding their market.

Threats

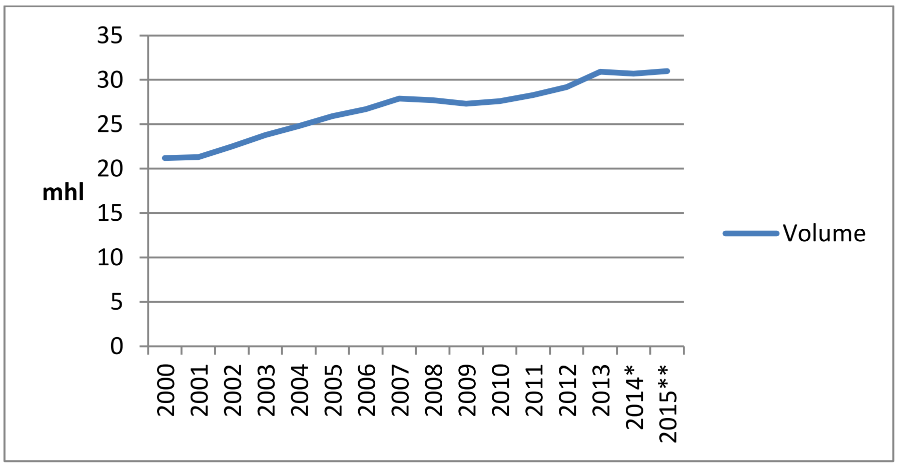
The company will face threats when entering the U.S. wine market. One of them is competing against similar products (e.g. Port, Sherry, Moscatel) that are known and popular in the U.S. market. Those products are strong rivals for the Villa Oeiras brand due the unfamiliarity of their product in the market. Another threat is that the U.S. wine market is very vast and fragmented. As said in the weaknesses, if the company doesn’t know the profile of their customers, they highly risk being unsuccessful in this particular market. Plus, they produce one type of fortified wine which limits the range of potential customers. Having only one product makes it more important for the company to study the fortified wine market and to identify their potential niche.

This SWOT summary shows that for a successful launch in the United States, the company needs to find the appropriate niches due to their unfamiliar product and not having an initial demographic report. Once the niches are found, they need suitable markets to target the potential customers. Afterwards, they need to identify what is the best way to advertise the product to them. The company can use their medals, unique product, unique history, and ViniPortugal's tools to advertise and to stand out from the other similar products. They will need to be prepared to invest the time necessary when launching in the United States along with improving certain aspects to increase sales. Management should be adjusted for when demand rises. They should start with communication and educate the employees, or modify the selection of the chosen employees. These two aspects would increase efficiency within the company.

1.4. United States wine market

The citizens of the United States annually spend 216 billion dollars on alcoholic beverages. They mostly spend on beer ($104 billion) followed by spirits ($80 billion) and wine ($32 billion) (Wine Market Council, 2016).

The wine consumption in the United States is at 11,9 liters per capita (Wine Market Council, 2015). The number of wine consumers has increased by 46,2% since 2000 (figure 1). The country became the leading wine consumers in 2011. This increase is due to the country experiencing a rise of new wine consumers, growth in income and a change in eating habits (OIV, 2017).



*Provisional data; **Forecast data Source: IVV, 2017a

Figure 1: United States wine consumption from 2000 to 2015

The United States' wine production has increased 10% since 2012, but the volume isn't enough to satisfy the population's demand (table 4). The demand caused the nation to do wine trades to supply the consumers, and it led the country to be one of the biggest wine trade markets in the world. In 2016, the United States has become the number one importer of wine in value (5.016 billion euros) and third in volume (11.2 million hl) after Germany and the United Kingdom (table 5).

Table 4: United States wine production (excluding juice and must)

Years	2012	2013	2014	2015*	2016**	2016/2015 Variation in volume	2016/2015 Variation in %
Volume in mhl	21.7	24.4	23.1	21.7	23.9	2.2	10%

*Provisional data; **Forecast data Source: OIV, OIV Experts, Trade Press

Table 5: United States wine import (excluding must)

Volume (mhl)		Value (bn EUR)	
2015	**2016**	**2015**	**2016**
11	11.2	4.856	5.016

Source: OIV, GTA

Regarding volume, the United States imports mostly bottles (65%) followed by bulk wine and containers over 2 liters (24%), and sparkling (10%) (OIV, 2017).

Wine sales have been increasing every year by 2% to 3% for the past 21 years (Wine Institute, 2014ab). In 2014, Frederickson (2015) estimated wine revenue to approximately $40 billion, with 69% of sales coming from domestic products and 31% from imported wine.
The average wine consumer will purchase a bottle between 10$ and 15$ (Brager, 2015).

1.4.1. Wine demographics

In July 2016, the U.S. Population Clock recorded 324 million people living in the United States. The population is slightly more female (51%) than male (49%) and their ethnic background is predominantly Caucasian (64%) followed by Hispanic (16%), African American (13%), and Asian (5%). The generation groups consist of 27% Millennials (from 21 to 37), 14% Gen X (from 38 to 49), 23% Baby Boomers (from 50 to 68), and 9% Mature (over 69) (U.S. Census, 2010).

It was estimated that 35% of the U.S. population consumes wine (Wine Market Council, 2015). This wine consumer segment is slightly more female (57%) than male (43%) and their ethnic background is predominantly Caucasian (70%) followed by Hispanic (13%), African American (11%), and Asian (5%). The age groups consist of 21% from 21 to 34, 16% from 35 to 44, 18% from 45 to 54, 21% from 55 to 64, and 24% from 65 and above (Nielson, 2016). The wine consumer tends to have a higher education, a higher income, and a healthier lifestyle (McCann and al., 2003). Also, the primary wine consumer states are California, Florida, New-York, Washington, Texas, and Illinois, in that order (FranceAgriMer, 2016).

From the information above, wine consumers in the United States tend to be female, Caucasian, from all generations, educated, have a high income, and healthy. This knowledge even though specific, creates a vast wine consumer segment. It isn’t accurate enough to help wine affiliated business to market their wine to the consumer along with outcompeting similar products. It also isn’t specific enough to satisfy the extensive range of wine consumers. It is why segmenting the wine consumption market is essential for companies and the consumers. It allows the company to aim a product towards a specific group of people. Many studies were conducted to study a wide range of wine consumers with variant needs in the goal to create segments.

In 2004, Constellation Brands Inc. conducted the most extensive consumer research project in the wine industry. The research was named Project Genome, and it is a survey of a 100 questions based on purchase behavior, preferences, and taste profiles. In 2012, their most recent survey, a total of 4.000 U.S. citizens that purchase and consume wine at least once every three months participated (Constellation Brands, 2017). The results identified six distinct types of wine drinkers: Price Driven, Everyday Loyal, Overwhelmed, Image Seekers, Engaged Newcomers, and Enthusiasts.

1. The Price Driven segment is attentive to prices as it is their top factor before making a purchase. They spend on average 8$/bottle. They represent 21% of the participants and are mostly female.
2. The Everyday Loyal segment is a regular wine consumer and they tend to be loyal to their favorite brands. They spend on average 10$/bottle. They represent 20% of the participants and they are mostly female.
3. The Overwhelmed segment occasionally consumes wine due to the feeling that wine is complicated to shop. They spend an average of 9$ on a bottle. They represent 19% of the participants and are mostly female.
4. The Image Seekers segment is attentive to what they purchase. They want the choice of the wine do impress others and to reflect a positive image of themselves. They spend on average 12$/bottle. They represent 18% of the participants and are mostly male.
5. The Engaged Newcomers are the youngest segment. They are new to consuming wine and mostly drink it in social environments. They are eager to learn more. They spend on average 13$/bottle. They represent 12% of the participants and are mostly male.
6. The Enthusiast segment is passionate about the wine experience (e.g. researching, reading, shopping, discussing, drinking, and sharing with others). They consume a significant amount of high end wines, spending on average 13$/bottle. They represent 10% of the participants and are slightly more male but will soon to be equally both genders (Penn, 2017).

Wine consumption is related to age and income (Hussein et al., 2007). Indeed, age is an important variable when purchasing a bottle of wine. Thach and al. (2015) found that the younger consumers spend more on a wine bottle than the older ones. They also discovered that the educational level didn't have any significance on the amount spent on a bottle. Their study created three segments:

1. The Low Spenders (below 10$) are of age 50 and above. They represent both genders, and they tend to have at least a child under 18 living at home. They have the lowest household income compared to the two other segments. They are the least involved in wine and thus are the least knowledgeable in that field. They tend to purchase their wine from grocery stores.
2. The Moderate Spenders (between 10$ and 15$) have an average age of 43. They are slightly more female and have a medium to high income. They are somewhat involved in wine and are knowledgeable in the subject. They purchase their wines from warehouse stores and use discounts.
3. The High Spenders (above15$) have an average age of 38. They have a medium to high income and are slightly more male. They are very knowledgeable about wine and very involved. They purchase their wine from several different stores (e.g. drug stores, convenient stores, wine and liquor shops, and winery tasting rooms).

The above segments are very helpful for affiliated wine businesses to aim their product more efficiently. Though there are many studies on various wine consumer segments, there is upcoming research on new types of consumers that have yet to be studied. For example, it would be interesting to create segments based on ethnic groups as some are on the rise as wine consumers and have buying power (Velikova and Dodd, 2016).

1.4.2. Wine market trends

As previously stated, wine consumption and sales have been on the rise. It can be predicted that this trend will continue in the upcoming years as wine is becoming a lifestyle beverage for all generations (Bruwer et al., 2011). As wine consumption becomes a lifestyle, it can be assumed that it will become the daily beverage. As seen in the Wine Market Council of 2016, the Occasional wine drinker segment dropped from 26,2% to 20,3% (from 2000 to 2015) due to some consumers becoming High Frequency wine drinkers.

Wine consumption increases with age and experience (Quester and Smart, 1996) which is currently true when it comes to the Millennial generation. They are a fast growing wine consumer segment that is technology savvy, curious, open minded, and eager to learn more about wines (Gillespie, 2010; Nielson, 2007). They are responsible for the growth of the High Frequency wine drinker segment (from 7,6% in 2000 to 13,9% in 2015) (Wine Market Council, 2016). They are a generation between 70 and 76 million people with an average annual income of 211 billion dollars (Kleber, 2009), and they represent 35% of the wine consumption population (Wine Market Council, 2016).

Another segment to pay attention to is the Hispanic community because they have the fastest growing buying power compared to other minority groups, and their wine consumption per year is rapidly increasing (Velikova and Dodd, 2016).

It is expected that the demographics of the United States will drastically change due to an increase of Asian and Hispanic immigrants along with lower birth rates from the Caucasians (Chang and al., 2016). According to Pew (2015), by the year 2065, the U.S. population will consist of 46% Caucasian, 24% Hispanic, 14% Asian, and 13% African American. These changes will create new segments or change the preexisting ones which will lead to changes in the wine market trends.

1.4.3. Fortified wine demographics

In the United States, fortified wines represent 8% of the market (FranceAgriMer, 2016). The most popular styles are primarily tawny port followed by ruby port, dry sherry (Fino, Manzanilla, and Palo Cortado), and Madeira (Hersh, 2015; Ruben, 2014). French fortified wines were also mentioned such as Banyuls and Rivesaltes. Though, due to fortified wines representing such a small market, there isn't any demographic research aimed towards fortified wine consumers in the U.S. specifically. Yet, there have been surveys about wine style preferences and fortified wine sales in restaurants which can be used as guidance.

One survey was conducted by Thach et al. (2015) on wine consumers and it gathered 1.072 U.S. citizens from all 50 states. The participants were slightly more female (59%) than male (41%). There were from all generations, 27% young Millennials under the age of 29, 29% older Millennials under 37, 23% Gen X, and 21% Baby Boomers. Their ethnicity were mostly Caucasian (65%) followed by Hispanic (13%), African American (11%), and Asian (11%). Their median annual income was between $50.000 and $69.999 and they had a higher education with 60% having a college degree. In terms of status, 59% were married. The results from this study show that 8% of the participant’s favorite type of wine is fortified which represents less than 100 of the respondents. Understandably the demographics for that specific segment wasn’t analyzed due to the sample size but according to an article from WineBusiness.com, Hispanics represent a potential market for fortified wines as their preferred wine styles are dessert wines and Moscatos. Plus, it was stated that their preferred country of origin for a wine are Spain, Argentina and Chile, in that order (Kirschenmann, 2013).

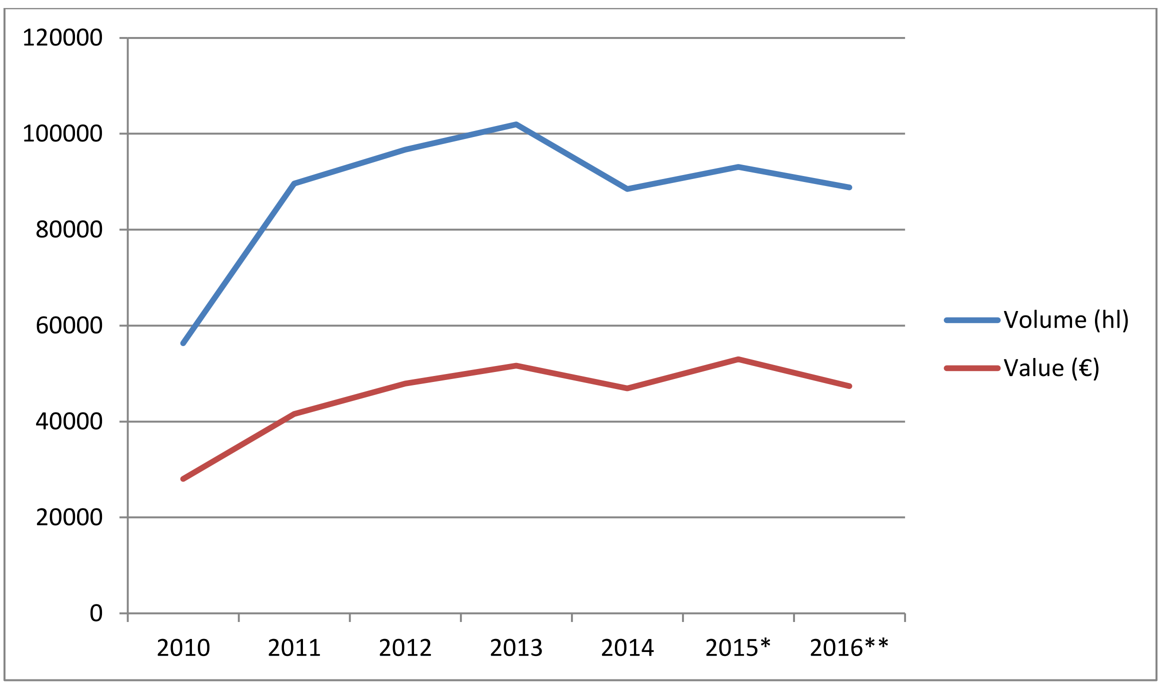
The other study was conducted by Hersh (2015) which gathered 100 sommeliers. According to the results, fortified wines are difficult to sell in the U.S. especially in restaurants due to its high alcohol content, lack of interest from the guests, and lack of knowledge from the food and beverage professionals. Some sommeliers believe that cocktail and mixology trends, consumers looking for original products, and fortified wine festivals (e.g. sherry festivals) are helpful. Though, to obtain higher sales, some sommeliers said that the consumers and professionals need to be educated about fortified wines and, Port and Madeira houses need to be more present on social media.

According to the data and studies, the fortified wine market is small but present. Perhaps the citizen that identify themselves as Hispanics and enthusiast wine consumers are the target market but further analysis need to be performed to identify who are these consumers.

1.5. Portugal's fortified wine exports to the United States

Portugal is the 9th biggest exporter in the world (OIV, 2017). The United States imports 1,7% of their wines, of which 21% are fortified wines. From 2011 to 2015, the demand to import Portuguese fortified wines has been rising, especially in value. The volume increased by 2,96% (from 35.666 hL to 36.722 hL) and the profit raised by 22,8% (from 25.902 million euros to 31.807 million euros) ("Portugal wine exports to USA in 2015", 2017).

According to the IVV database, the Portuguese fortified wines exported to the United States with a DOP are Porto and Madeira. According to figure 2, the import of DOP Porto is increasing, going from 56.351 hl in 2010 to 88.830 hl in 2016, but is predicted to have a small dip in demand since 2013 (101.962 hl in 2013; 88.830 in 2016). The value of the port wine is lower than its volume, and even though the cost doubled since 2010, it is predicted to decline (28.068€ in 2010; 52.958€ in 2015; 47.372€ in 2016).

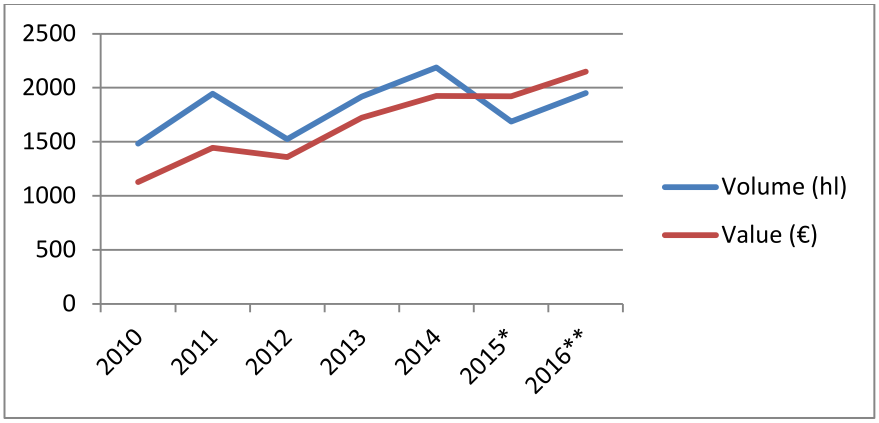


*Provisional data; **Forecast data

Source: IVV, 2017b

Figure 2: Evolution of DOP Porto exports to the United States

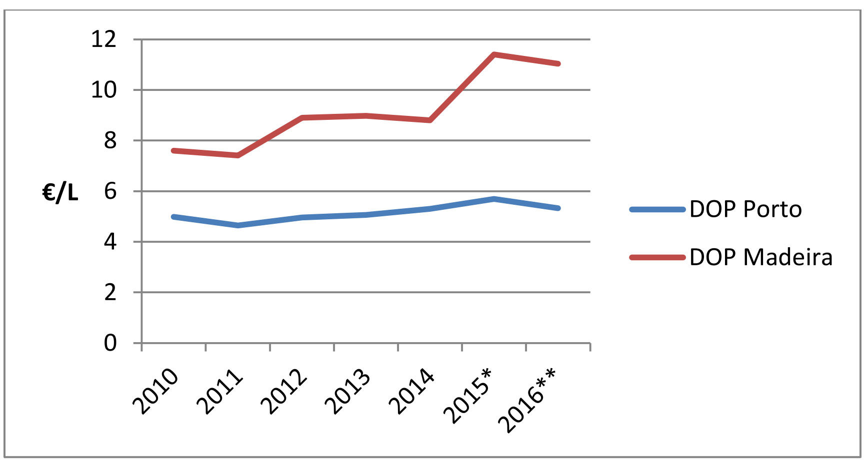
According to figure 3, there is an increase in exporting DOP Madeira to the United States, going from 1.483 hl in 2010 to a predicted 1.950 hl in 2016. The value of this fortified wine is predicted to double from 1.127 € in 2010 to an anticipated 2.150€ in 2016. The value is expected to surpass the volume in 2015.



*Provisional data; **Forecast data Source: IVV, 2017b

Figure 3: Evolution of DOP Madeira exports to the United States

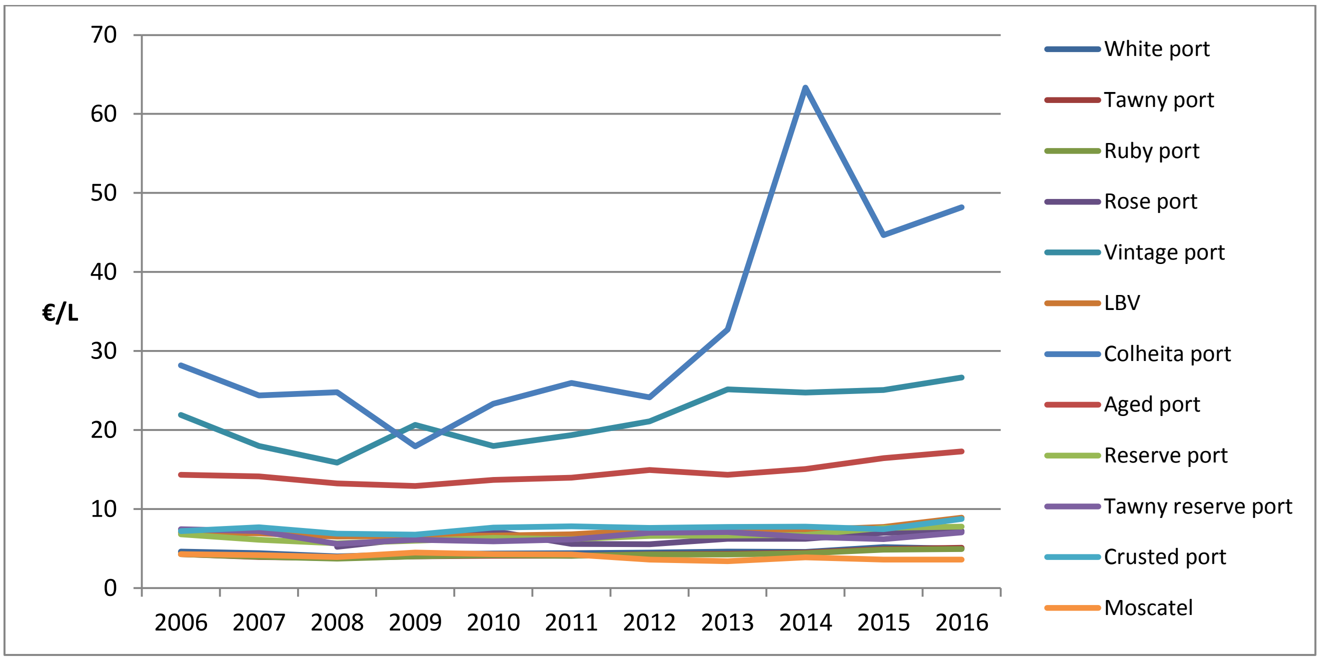
Figure 4 shows that both products are increasing in value/volume, but DOP Madeira is surpassing DOP Porto. The significant difference between the two products is that, since 2010, DOP Porto increased its value/volume by 7% while DOP Madeira increased by 45%. DOP Madeira has a significant increase in demand and is becoming a high end product. The DOP Porto value/volume is predicted to experience stagnation while DOP Madeira will experience a fast rise.



*Provisional data; **Forecast data Source: IVV, 2017b

Figure 4: Comparison of average price (€/L) of DOP Porto and DOP Madeira

When looking at the value/volume of the other Portuguese fortified wines exported to the United States (figure 5), there is a general increase except for tawny reserve port and Moscatel which have decreased by -5% and -16%, respectively. The styles with the most significant increase are Colheita port (+71%) and Rosé port (+38%). The others are Late Bottled Vintage (+26%), Crusted port (+22%), Vintage port (+22%), Aged port (+21%), Tawny port (+19%), Ruby port (+15%), Reserve port (+14%), and finally White port (+7%). The increase of value/volume is expected as well as the cost per bottle because there is a general rise in price for all the wines in the United States country (FranceAgriMer, 2016).



LBV: Late Bottled Vintage Source: IVDP, 2017

Figure 5: Value/volume of Portuguese fortified wines exported to the United States from 2006 to 2016

In 2013, the average price for a bottle of fortified wine was $8,06 (FranceAgriMer, 2016). In comparison to the value/volume of the Portuguese fortified wines (figure 5), they are all around 8$/bottle except for Colheita port (48€/l), Vintage port (27€/l), and Aged port (17€/l) which places them as higher end fortified wine styles.

1.5.1. Fortified wines export trends

According to the annual report from Consejo Regulador de Los Vinos de Jerez, there has been a slow decline in importing sherry into the United States for the past 12 years except in specific cities such as New York and San Francisco where there is a small rise (Ruben, 2014). Though, when it comes to importing Portuguese fortified wines, there is a slow growing demand for almost all fortified wine styles, except for Tawny reserve port and Moscatel. When looking at the fortified wines with an appellation, there is a rise in demand for DOP Madeira while the demand for DOP Porto is stagnant. According to past studies, the demand seems to be from Hispanics and wine enthusiasts. If so, it can be presumed that the demand will only increase as both segments are rising in number.

The value and volume of DOP Madeira are increasing rapidly while the volume and value of DOP Porto are predicted to decrease. Furthermore, for the past 10 years, the value/volume for all Portuguese fortified wines have been rising which is expected because all wine types' price per bottle have been increasing in the United States.

ViniPortugal aims to obtain a sustainable growth in volume and average price of the Portuguese wines. They have invested 2.5 million euros into promoting in the United States market (ViniPortugal, 2017). Between the help from ViniPortugal and the existing demand for fortified wines in the United States, it can be assumed that the export of such wine products is on the rise. Though fortified wines represent a very small market and, as stated by some sommeliers, it is hard to sell such a wine style. To increase sales, multiple actions must be taken by the Portuguese fortified wine houses and ViniPortugal. The following actions are the most important to reach the average American wine consumer (Thach et al., 2015):

- Educate the salespersons and the wine consumers about fortified wines and their different styles;
- Promote the wine region;
- Wineries need to boost their interaction with their consumers and be more present on social media platforms;
- Winery and wines needs to be accessible by mobile phone websites and wine apps;
- Consider matching price/bottle with the competition;
- Demographic analysis on the fortified wine consumers.

2. Materials and methods

2.1. Survey questions

Two surveys were created. The first survey was aimed towards individuals that know Carcavelos fortified wine and would purchase it. This survey was named “Villa Oeiras survey”. The second survey was aimed towards U.S citizens, and it was named “U.S. citizens survey”.

When creating the Villa Oeiras survey, the aim was to find correlations between gender, age, education level, wine consumption, fortified wine consumption, and wine consumer profile. Other questions were asked but were not used for this study. The chosen formatting was multiple choices, except for age, to facilitate homogenization of the answers. When creating the U.S. citizens survey, the aim was the same as the previous one. The differences are that income and status were added to increase demographic variables (table 6). The formatting was the same; multiple choices, except for age.

It’s important to note that choosing to use the six wine drinker categories, from the Project Genome, as a variable was to further categorize the wine consumers due to the lack of research on fortified wine consumers in the United States. Moreover, the original project used hundreds of questions to group the participants into the found six segments but for this study, the respondents had the option to identify themselves as they see fit, or not.

Table 6: Questions and answers for Villa Oeiras and U.S. citizens surveys

Questions	Answers
Gender	Male
	Female
Age	Open end question
Highest level of education	Less than high school
	High school or equivalent
	Some college but no degree
	Associate degree
	Bachelor degree
	Graduate degree
Status	Single, never married
	Single but cohabiting with a significant other
	In a domestic partnership or civil union
	Married
	Separated
	Divorced
	Widowed
	< 20 000

Household income ($)	20 000 – 34 999
	35 000 – 49 999
	50 000 – 74 999
	75 000 – 99 999
	> 100 000
Wine consumption	Every day
	A few times per week
	A few times per month
	Only on special occasions
	Never
Fortified wine consumption	Every day
	A few times per week
	A few times per month
	Only on special occasions
	Never
Wine drinker category	Price driven: I believe you can buy good wine without spending a lot. So price is a top consideration.
	Every day loyal: Wine drinking is part of my regular routine. When I find a brand I like, I will stick with it.
	Overwhelmed: I drink wine, but it does not play an important role in my life. I don't enjoy shopping for wine and find it complex and overwhelming.
	Image seeker: How others perceive me is important. I want to live a life that impresses others. I want to make sure the wine I choose says the right thing about me.
	Engaged newcomer: I'm young and new to an intimidating category. Wine is a big part of the socializing I do. I'm interested in learning more.
	Enthusiast: I love everything about the wine experience. I love researching purchases, reading reviews, shipping, discussing, drinking, and sharing with others.

2.2. Survey development

Villa Oeiras and U.S. citizens surveys were distributed in various locations. Villa Oeiras was distributed in a wine store, a hostel, and online while the U.S citizens survey was only distributed online.

The chosen wine store was Garrafeira Nacional located in the Time Out Market of Lisbon, Portugal. The surveys were managed by two employees from mid-July to mid-August of 2017. The instructions were to give the surveys to only the customers that purchased Villa Oeiras Carcavelos fortified wine. After a month, the surveys were collected. The template for this survey is shown in annexe 1.

The chosen hostel was Nice Way located in Cascais, Portugal. It was distributed during an arranged wine tasting. The design was to have the participants taste the Villa Oeiras Carcavelos fortified wine and to fill out the given survey at the same time. It was a onetime event due to the lack of given bottles. The template for this survey is presented in annexe 2.

The chosen online platform for both, Villa Oeiras and U.S. citizens surveys, was SurveyMonkey. The link to the survey was distributed by using personal contacts and social media such as LinkedIn, SupAgro alumni and Facebook. The Villa Oeiras survey was aimed towards individuals who have drunk Villa Oeiras fortified wine in their past. The template for this survey is presented in annexe 3. The U.S. citizens survey was aimed towards all of the U.S. citizens. The template for this survey is presented in annexe 4. After a month, the data from both surveys were collected.

2.3. Sample

The data collected was put into Xcel spreadsheets presented in annexe 5 and 6. The Villa Oeiras survey from the Garrafeira Nacional wine shop gathered 17 answers. As seen in table 7, the customers consist of 10 males and 7 females from the Millennial, Gen X, and Baby Boomer generations.

Table 7: Demographic summary from the Garrafeira Nacional survey

Categories	Sub-categories	Frequency	Percentage
Gender	Male	10	59%
	Female	7	41%
	Total	17	100%
Age generation	Millennial (17 to 36)	7	44%
	Gen X (37 to 52)	4	25%
	Baby Boomers (53 to 71)	5	31%
	Total	16	100%

The survey from Nice Way hostel gathered 20 participants (table 8). They consisted of 9 males and 11 females from only the Millennial generation, and most of them have at least a bachelor’s degree.

Table 8: Demographic summary from the Nice Way hostel survey

Categories	Sub-categories	Frequency	Percentage
Gender	Male	9	45%
	Female	11	55%
	Total	20	100%
Age generation	Millennial (17 to 36)	18	100%
	Total	18	100%
Education	Some college but no degree	3	17%
	Associate degree	1	6%
	Bachelor degree	9	50%
	Graduate degree	5	28%
	Total	18	100%

The Villa Oeiras SurveyMonkey survey gathered 12 responses. According to table 9, the candidates consist of 9 males and 3 females from the Millennial, Gen X and Baby Boomer generations, with most of them obtaining a graduate degree.

Table 9: Villa Oeiras demographic summary from SurveyMonkey

Categories	Sub-categories	Frequency	Percentage
Gender	Male	9	75%
	Female	3	25%
	Total	12	100%
Age generation	Millennial (17 to 36)	8	67%
	Gen X (37 to 52)	1	8%
	Baby Boomers (53 to 71)	3	25%
	Total	12	100%
Education	Some college but no degree	1	8%
	Bachelor degree	1	8%
	Graduate degree	10	83%
	Total	12	100%

The three Villa Oeiras surveys generated a total of 49 participants. The participants came from various continents such as North and South America, Europe and Africa. The participants consist of 28 males and 21 females aged between 19 and 64.

The U.S. citizens SurveyMonkey survey gathered 41 answers. The participants come from 16 different states. Most of them come from California (7), New York (7), New Jersey (6) and Oregon (4), followed by Florida (3), Connecticut (2), Maine (2), Georgia (2), Maryland (1), Illinois

(1), Kansas (1), Michigan (1), Missouri (1), Montana (1), Texas (1) and, Washington (1). According to table 10, the participants consist of 18 males and 23 females from the Millennial, Gen X and Baby Boomer generations. They all received a high school diploma with most of the group obtaining at least a bachelor degree.

Table 10: U.S. citizens demographic summary from SurveyMonkey

Categories	Sub-categories	Frequency	Percentage
Gender	Male	18	44%
	Female	23	56%
	Total	41	100%
Age generation	Millennial (17 to 36)	26	70%
	Gen X (37 to 52)	5	11%
	Baby Boomers (53 to 71)	10	19%
	Total	41	100%
Education	High school degree or equivalent	2	5%
	Some college but no degree	6	15%
	Associate degree	2	5%
	Bachelor degree	22	54%
	Graduate degree	9	22%
	Total	41	100%

2.4. Survey analysis tools

The R software was the chosen tool to analyze the data collected from the surveys. The packages Rcmdr and FactoMineR were selected to run the Multiple Correspondance Analysis (MCA) on the dataset. MCA is performed in the presence of categorical variables and it functions as a multivariate data analyzer (Gebeyaw, 2017; Le et al., 2008). MCA was used in this study to create variable clustering. The most significant clusters were identified, analyzed, and discussed.

3. Results and discussion

Two surveys were created to analyze the demographics for the Villa Oeiras brand on the United States market. The first one was aimed towards consumers that are familiar with the Carcavelos fortified wine which means that they enjoy consuming it, an, would or have purchased it. The goal was to find correlations between gender, age group, education level, wine consumer profile, wine consumption, and fortified wine consumption. The surveys were distributed in a wine store in Lisbon, in a hostel in Cascais, and online. The data is presented in the first part of the result section. The second survey was aimed only towards the U.S. citizens to find correlations between their demographics, and their association with wine and fortified wine consumption. It was an online survey that was distributed using personal contacts and social media.

3.1. Villa Oeiras survey results

3.1.1. Demographics overview

The first surveys gathered 49 participants of which 57% are male and 43% are female (table 11). The participants came from various continents such as North and South America, Europe and Africa. They were aged between 19 and 64 which represent three generation groups: Millennials (70%), Gen X (11%), and Baby Boomers (19%). They all had at least a high school education but 83% had at least a bachelor's degree. The surveys gathered a group that is slightly more male, mostly from the Millennial generation where the age is between 19 and 36, and the group has a higher level of education.

Table 11: Villa Oeiras demographic summary

		Frequency	Percentage
Gender	Male	28	57%
	Female	21	43%
	Total	49	100%
Age generation	Y Millennials (17 to 36)	33	70%
	X (37 to 52)	5	11%
	Baby boomers (53 to 71)	9	19%
	Total	47	100%
Education	Some college but no degree	4	13%
	Associate degree	1	3%
	Bachelor degree	10	33%
	Graduate degree	15	50%
	Total	30	100%

The participant's frequency of wine and fortified wine consumption is shown in table 12. The results show a total of 86% of the participants are frequent wine consumers whether they drink wine every day (38%) or a few times per week (48%). The other 14% consume wine only occasionally. When asked about their fortified wine consumption, the results are opposite from the wine consumption frequency. Most of the participants (65%) consume fortified wines occasionally whether it's a few times per month (21%) or only on special occasions (44%). Though, there is a small percentage of participants that either frequently (21%) or never (13%) consume fortified wines. Overall, the majority of the participants are regular wine consumers that either frequently or occasionally consume fortified wines. The minority of the group is the occasional wine consumers that never drink fortified wines.

Table 12: Villa Oeiras wine and fortified wine consumption frequency

	Wine consumption		Fortified wine consumption	
Frequency of consumption	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Every day	18	38%	2	4%
A few times per week	23	48%	8	17%
A few times per month	2	4%	10	21%
Only on special occasions	5	10%	21	44%
Never	0	0%	6	13%

The wine drinker profile of the participants is presented in table 13. The top chosen profiles are Enthusiast (29%), Overwhelmed (22%), Price Driven (18%), and Engaged Newcomer (16%). By using the profile descriptors from the Genome Project, two main groups can be created from the chosen profiles. The Enthusiast and Engaged Newcomers profiles tend to be male, knowledgeable in the wine field, engaged in wine consumption, and eager to learn more about wine. They also are the profiles that spend more when purchasing a bottle (average of 13$/bottle). The Overwhelmed and Price Driven profiles tend to be female, have the feeling of uncertainty when it comes to their knowledge in wine, occasionally engaged in wine consumption, and be loyal to the brands they already know. In comparison to the previous profiles, they spend less when purchasing a bottle (average from 8% to 9$/bottle).

Table 13: Villa Oeiras wine drinker profile

Wine drinker profile	Frequency	Percentage
Price Driven	8	18%
Everyday Loyal	5	11%
Overwhelmed	10	22%
Image Seeker	2	4%
Engaged Newcomer	7	16%
Enthusiast	13	29%

After observing the overall characteristics of the group of participants, a Multiple Correspondence Analysis (MCA) was performed on the dataset.

3.1.2. Multiple Correspondence Analysis and segmentation

A MCA is used when the dataset has categorical variables like in most survey results. It is a tool that identifies redundant variables to create groups. Those groups are then analyzed to identify the similar attributes within the segment and to identify the differences between the segments.

When MCA was performed on the dataset, all variables were used except for country of origin due to the low number of participants per country. The results showed that five clusters were created on a two dimension graph (figure 6). Cluster 3 gathers the most participants (19) followed by cluster 1 (13), cluster 2 (12), cluster 4 (4), and cluster 1 (1). Even though the dimension isn't of strong significance (26.42%), the clusters 1 (black), 2 (red), and 3 (green) were chosen to be analyzed as they grouped the most participants.

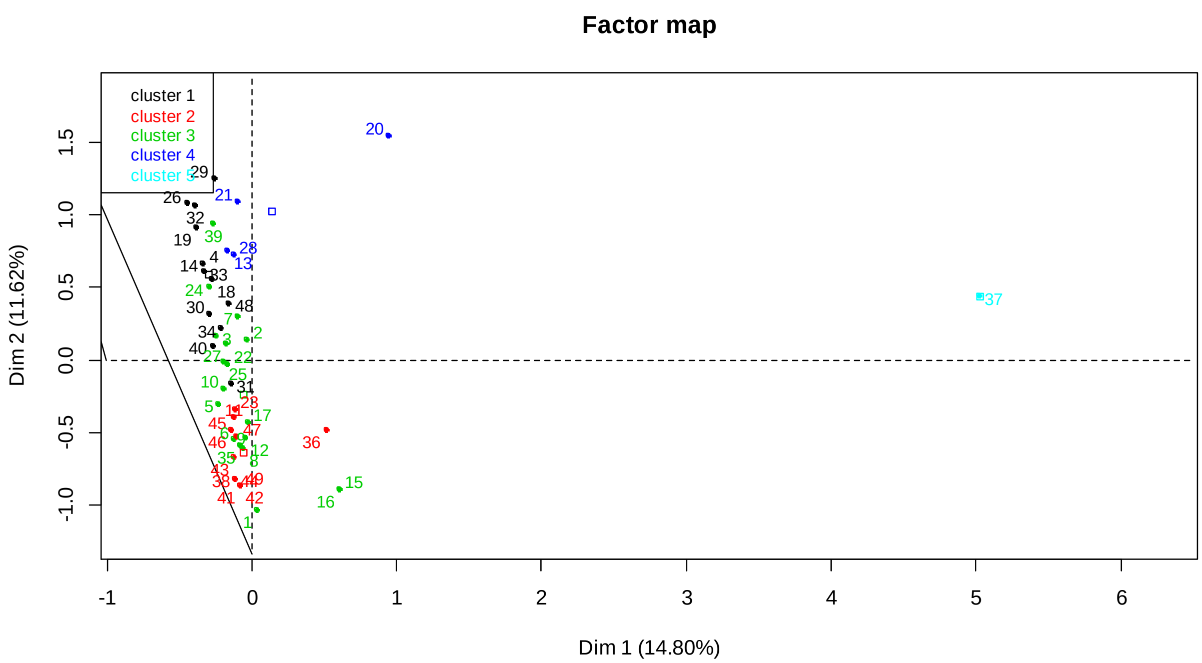


Figure 6: Villa Oeiras MCA cluster map

Table 14 shows the demographics for the three chosen clusters. Cluster 1 contains 77% of females and 23% of males which makes the group more female dominant. The most prominent generation is the Millennial (75%), followed by Baby Boomer (17%), and Gen X (8%). The group has obtained at least a bachelor degree (45%) which means that 81% of the group has a higher education (81%). Cluster 2 contains only males. They are mostly from the Millennial generation with a small percent of the Baby Boomer generation (17%). The entire group has a higher education where they obtained at least a Graduate degree. Cluster 3 contains 58% of males and 42% of females which makes the group slightly more male dominant. Half of the group is from the Millennial generation, but there is a split between the Gen X (22%) and the Baby Boomer (28%) generation. The education level variable in this cluster is not discussed due to only 4 participants shared that information.

Table 14: Villa Oeiras cluster demographics

Variables	Gender		Generation			Education		
	Male	Female	Millennials	Gen X	Baby Boomer	Some college but no degree	Bachelor degree	Graduate degree
Cluster 1	23%	77%	75%	8%	17%	18%	45%	36%
Cluster 2	100%	0%	83%	0%	17%	0%	0%	100%
Cluster 3	58%	42%	50%	22%	28%	0%	100%*	0%

* 4 participants answered the educational level question

Table 15 represents the frequency of wine and fortified wine consumption from each cluster. The participants in Cluster 1 consume wine at least a few times per week (70%) and consumes fortified wines either occasionally (46%) or never (38%). Cluster 2 contains participants that only consume wine on a regular basis along with occasionally consuming fortified wines (92%). Cluster 3 resembles Cluster 2. The differences are that Cluster 3 contains more everyday wine consumers (58%) and the frequency of fortified wine consumption is much higher with 42% of the participants frequently drinking a fortified wine.

Table 15: Cluster wine and fortified wine consumption

		Every day	**A few times/week**	**A few times/month**	**Only on special occasions**	**Never**
Cluster 1	Wine consumption	8%	62%	0%	31%	0%
	Fortified wine consumption	8%	8%	31%	15%	38%
Cluster 2	Wine consumption	50%	50%	0%	0%	0%
	Fortified wine consumption	0%	0%	42%	50%	8%
Cluster 3	Wine consumption	58%	37%	0%	5%	0%
	Fortified wine consumption	5%	37%	5%	53%	0%

The wine drinking profiles from each cluster are represented in table 16. It shows that Cluster 1 contains many participants considering themselves as Overwhelmed wine consumers (69%) with a small amount of Everyday Loyal (15%). Meaning that cluster 1 mostly contains wine consumers that are lacking knowledge in the wine field. They tend to find it difficult to purchase a bottle of wine due to the significant amount of varieties on the market. This cluster also contains a few participants that tend to buy only their favorite brands. Cluster 2 mostly includes Enthusiast (91%) wine consumers. This group has passionate wine consumers and adores any wine experience. They tend to enjoy researching about a wine product, doing wine tastings, discussing, and sharing wine with others. Cluster 3 contains a range of different profiles which makes this group inconclusive regarding wine consumption characteristics.

Table 16: Cluster's wine drinking profiles

	Enthusiast	**Overwhelmed**	**Everyday Loyal**	**Price Driven**	**Image Seeker**	**Engaged Newcomer**
Cluster 1	8%	69%	15%	8%	0%	0%
Cluster 2	91%	0%	0%	9%	0%	0%
Cluster 3	2%	1%	3%	6%	2%	3%

3.1.3. Villa Oeiras survey discussion

The MCA for the Villa Oeiras survey identified three clusters, each with specific characterizations. Each cluster is a group of wine consumer that would potentially buy the Carcavelos fortified wine depending on the circumstances.

Cluster 1 is a segment predominantly female from the Millennial generation which means that they are under the age of 36. They have obtained at least a bachelor degree which defines the group as having a higher education. They are frequent wine consumers that occasionally or never drink fortified wines. They consider themselves as being either Overwhelmed or Everyday Loyal meaning that they tend to have a lack of knowledgeable about wines. This lack of knowledge leads them to not wanting to take risks when purchasing a bottle of wine which leads them to be loyal towards brands they know and trust. According to the Genome Project, this segment is the lowest spenders when purchasing wine bottles. They tend to spend on average 8$ to 9$ per bottle.

Cluster 2 is a male only segment predominantly from the Millennial generation. They all have obtained a Graduate degree meaning that they have a higher education. They all consume wine on a regular basis along with occasionally drinking fortified wines. Almost the entire group considered themselves as Enthusiast wine consumers, meaning that they are passionate about wine related activities and actively search for such experiences. Enthusiast consumers also tend to be the highest spenders when purchasing wine bottles.

Cluster 3 is an inconclusive segment due to the differences within the group. It is slightly more male coming from all three generations, and the education level is unknown due to the lack of answers. It contains frequent wine and fortified wine consumption, but the profiles are all different.

The most suitable segment for Villa Oeiras is Cluster 2 due to their characteristics. They are high spenders, prone to purchase from new brands and new regions. Their search for new experiences in wine related environments makes them a potential market for the Carcavelos fortified wine.

3.2. United States citizens survey results

3.2.1. Demographics overview

The demographics results from the U.S. citizens survey is summarized in table 17. It gathered 41 participants of which 44% are male and 56% are female. They reside in 16 different states. Most of them come from California (7), New York (7), New Jersey (6) and Oregon (4), followed by Florida (3), Connecticut (2), Maine (2), Georgia (2), Maryland (1), Illinois (1), Kansas (1), Michigan (1), Missouri (1), Montana (1), Texas (1), and Washington (1). The participants are aged between 22 and 71 with 38 being the average age. The generation groups consist mostly of Millennials (63%), followed by Baby Boomers (24%), and Gen X (12%). The participants status were either Single (39%), Single but cohabitating with a significant other (17%), or Married (29%). There is a small percentage of Divorced, Separated, and Widowed. Most of the participants have obtained a higher education (76%) and a small portion has at least a High school diploma (25%). The income variable was split into three categories: Low (under 35 000$), Moderate (between 35 000$ and 75 000$), and High (above 75 000$). The participants are split almost equally between having a Low Income (27%), a Moderate Income (32%), and a High Income (37%).

Table 17: U.S. citizens demographics summary

		Frequency	Percentage
Gender	Male	18	44%
	Female	23	56%
Age generation	Y Millennials (17 to 36)	26	70%
	X (37 to 52)	5	11%
	Baby boomers (53 to 71)	10	19%
Status	Single, never married	16	39%
	Single but cohabitating with a significant other	7	17%
	Domestic partnership or civil union	2	5%
	Married	12	29%
	Divorced	1	2%
	Separated	1	2%
	Widowed	1	2%
Education	High school degree or equivalent	2	5%
	Some college but no degree	6	15%
	Associate degree	2	5%
	Bachelor degree	22	54%
	Graduate degree	9	22%

Income ($)	< 20 000	5	12%
	20 000 – 34 999	6	15%
	35 000 – 49 999	5	12%
	50 000 – 74 999	8	20%
	75 000 – 99 999	6	15%
	> 100 000	9	22%

According to table 18, most of the participants are frequent wine consumers, drinking wine at least a few times per week (71%) while the minority of the group consumes wine occasionally (27%). The fortified wine consumption results show the opposite. Most of the participants consume it occasionally (81%) while others never do (15%). None of the participants consume fortified wines every day, but some do drink it a few times per week (5%).

Table 18: Frequency of wine and fortified wine consumption

	Wine consumption		**Fortified wine consumption**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Every day	14	34%	0	0%
A few times per week	15	37%	2	5%
A few times per month	6	15%	8	20%
Only on special occasions	5	12%	25	61%
Never	1	2%	6	15%

As shown in table 19, most of the participants consider themselves to be Enthusiast wine consumers (46%). The other halves of the participants are equally split into Price Driven (12%), Engaged Newcomer (12%), Overwhelmed (10%), and Image Seeker (10%). There is also a small percentage that considers themselves as Everyday Loyal (7%). It seem that the participants that consume wine frequently and fortified wine occasionally consider themselves as Enthusiast wine consumers.

Table 19: Wine drinker profile

	Frequency	**Percentage**
Price Driven	5	12%
Everyday Loyal	3	7%
Overwhelmed	4	10%
Image Seeker	4	10%
Engaged Newcomer	5	12%
Enthusiast	19	46%

The MCA tool was performed on this dataset to find similarities between the participants so that segments can be created. All the variables were used except for the state of residence. It was removed as a variable due to the number of participants per state is too low to show a significant representation.

3.2.2. Multiple Correspondence Analysis and segmentation

When performing the MCA on the U.S. citizens survey dataset, six clusters were created on a two dimension graph. As seen in figure 7, Clusters 1 and 2 aren't significant as it represents only one participant. Clusters 5 and 6 are also insignificant due to representing groups of 3 participants. Cluster 3 and 4 are the only significant groups. Cluster 3 gathers 24 participants, and Cluster 4 gathers 11 participants. Both clusters were analyzed to find similarities within each cluster and to find the differences between the two clusters.

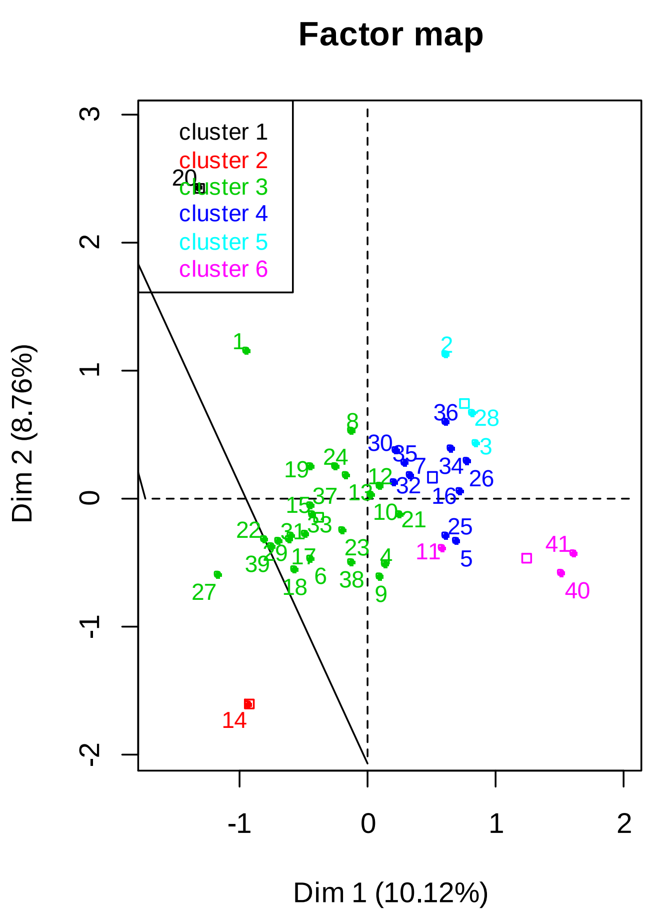


Figure 7: U.S. citizens MCA clusters map

As presented in table 20, Cluster 3 contains 42% of males and 58% of females which makes the segment slightly more female. The segment contains two main generation groups which are the Millennials aged from 22 to 36 and the Baby Boomers aged between 53 and 71. The majority of the group is Married (46%) and 25% are Single but cohabitating with a significant other. There is also a small percentage that is Single (17%). It can be proposed that the younger Millennials have a Single status while the older Millennials have a Single but living with a significant other and Married status. The Baby Boomers might be the ones with the Married, Divorced and Widowed status. Cluster 4 contains 73% female and 27% male participants making the segment predominantly female. This segment includes only Millennials meaning that all the participants are aged between 22 and 36. The majority of this segment is Single (91%) while the minority is in a Domestic partnership (9%).

Table 20: U.S. citizens cluster demographics

		Cluster 3	**Cluster 4**
Gender	Male	42%	27%
	Female	58%	73%
Generation	Millennials (17 to 36)	42%	100%
	Gen X (37 to 52)	17%	0%
	Baby Boomer (53 to 71)	42%	0%
Status	Single	17%	91%
	Single but cohabiting	25%	0%
	Domestic partnership	0%	9%
	Married	46%	0%
	Divorced	4%	0%
	Separated	0%	0%
	Widowed	8%	0%

Table 21 presents the education level and the income from both clusters. Cluster 3 includes 21% of participants with a degree lower than a bachelor's and 79% with at least a bachelor's. This segment contains participant with 46% of Moderate Income (between 35 000$ and 74 999$) and 45% of Higher Income (above 75 000$). Cluster 4 contains 91% of the participants with a higher education. Most of the segment has a bachelor's degree (82%) but not a Graduate degree (9%). All of the participants have a Lower Income (under 34 999$).

Table 21: U.S. citizens survey – Education level and Income

Education	**High school degree or equivalent**	**Some college but no degree**	**Associate degree**	**Bachelor degree**	**Graduate degree**	
Cluster 3	0%	17%	4%	50%	29%	
Cluster 4	0%	9%	0%	82%	9%	
Income ($)	**< 20 000**	**20 000 – 34 999**	**35 000 – 49 999**	**50 000 – 74 999**	**75 000 – 99 999**	**> 100 000**
Cluster 3	0%	4%	17%	29%	16%	29%
Cluster 4	45%	45%	0%	0%	9%	0%

According to the representation of consumption from table 22, Cluster 3 represents a segment where 75% of the participants frequently consume wine while 25% are occasional wine drinkers. When drinking fortified wines, the results are opposite where 83% consume it occasionally while 13% never do. In Cluster 4, all of the participants frequently consume wine and occasionally drink fortified wines (91%).

Table 22: Clusters for wine and fortified wine consumption

		Everyday	**A few times/week**	**A few times/month**	**Only on special occasions**	**Never**
Cluster 3	**Wine consumption**	46%	29%	21%	4%	0%
	Fortified wine consumption	0%	4%	29%	54%	13%
Cluster 4	**Wine consumption**	9%	91%	0%	0%	0%
	Fortified wine consumption	0%	0%	0%	91%	9%

The drinking profile, from table 23, shows that Cluster 3 mostly represents Enthusiast consumers (71%) along with a small percentage of Overwhelmed (8%), Price Driven (8%), Everyday Loyal (4%), and Image Seeker (4%). Cluster 4 represents two main profiles: Overwhelmed (36%) and Engaged Newcomer (36%). There is a small percentage of Enthusiast (18%) and Everyday Loyal (9%).

Table 23: Clusters for wine drinking profiles

	Enthusiast	**Overwhelmed**	**Everyday Loyal**	**Price Driven**	**Image Seeker**	**Engaged Newcomer**	**None**
Cluster 3	71%	8%	4%	8%	4%	0%	0%
Cluster 4	18%	36%	9%	0%	0%	36%	0%

3.2.3. U.S. citizens survey discussion

The MCA for the U.S. citizens survey identified two clusters. Depending on the characterizations for each cluster, there could be a market potential for Villa Oeiras brand.

Cluster 3 is a segment that is slightly more female and they are either from the Millennial, or the Baby Boomer generation. The cluster is divided into two age groups: from 22 to 36 and from 53 to 71. The majority have obtained at least a Bachelor degree which places the segment as having a higher education. The majority is Married or Single cohabitating with a significant other. The segment is composed of consumers that are in a relationship environment within their home and there is more than one person in the household. They have either a Moderate or a High income which correlates with the age group and the status of this segment. It can be supposed that this group of individuals is established within the household and the workplace. They are frequent wine consumers and occasional fortified wine consumers but, 25% occasionally drink wine and 13% do not drink fortified wines. Most identified themselves as being Enthusiast consumers which shows that they have an interest in wine. They actively look for new wine experiences and they are willing to spend on high end bottles.

Cluster 4 is a segment that is predominantly female from the Millennial generation meaning that this group represents consumers under the age of 36. Most of them have obtained a Bachelor degree with a small percentage of Graduate degrees. The majority of the group is Single, with a low household income of under 34 999$ meaning that they live alone and aren't yet established in the workplace. They frequently consume wine and occasionally drink fortified wine. They identified with being either an Overwhelmed or Engaged Newcomer wine consumer.

Between the two clusters, the most suitable one for Villa Oeiras is Cluster 3. This segment represents a group of U.S. citizens that would potentially buy Carcavelos fortified wines. It is supposed that this group is established within the household and workplace creating a financially stable segment. Being frequent wine and occasional fortified wine consumers along with identifying themselves as Enthusiast shows a definite interest in wine related activities. Being financially stable and having an interest in new wines shows a potential purchase of the Villa Oeiras fortified wine brand.

3.3. Segmentation comparison

Two potential market segments were identified. One market represents individuals from multiple countries and the other represents U.S. citizens. When comparing both segments with the same variables, similarities and differences were identified.

Both segments contain Millennials who have obtained a higher education. They both identified themselves as being Enthusiast wine consumers which correlate with their consumption behavior; regular wine drinking along with occasional fortified wine drinking.

The differences are related to gender, age, status, and income. One represents only the male gender while the other is slightly more female. It isn't an important difference as Enthusiast wine consumers tend to be slightly more male oriented, but it is becoming an equal gender group (Penn, 2017). Age, status, and income can be correlated. The segment that has the most Single individuals also has a low income and are only Millennials. This can be related to age. As young Millennials grow older, they will potentially become established within the household and the workplace. The other segment representing the Millennials and the Baby Boomers have a higher count for Married and Single but cohabitating with a significant other. They also have more income which is probably related to the number of individuals living in the household along with being older.

Even though the significance of the segments is low due to the number of participants, they are a good representation of past studies. This study showed that frequent wine consumers tend to have a higher education and income which correlates with the findings of McCann et al. (2003). Furthermore, both segments have a representation of Millennials that are Enthusiast wine consumers meaning that they are under the age of 36 and, they are high spenders. This correlates with the study of Thach and al. (2015) where they identified young wine consumers as being higher spenders compared to the older wine consumers. Moreover, having the Millennials and Enthusiast represented together in one segment correlates with the findings from the Genome Project. The Millennials are defined as being technology savvy, curious, open minded and, eager to learn more about wines (Gillespie, 2010; Nielson, 2007) which correlates with how Enthusiast are defined; passionate about the wine experience (researching, reading, shopping, discussing, drinking, and sharing with others).

From this knowledge, it can be proposed that the Villa Oeiras brand can successfully launch in the United States by targeting the following individuals:

- Male and female;
- From the older Millennial generation meaning that they are at the end of their 20's and mid 30's;
- Obtained at least a Bachelor degree;
- Status: Married or cohabitating with a significant other;
- Household income of above 35 000$ per year;
- Frequent wine consumers: daily or a few times per week;
- Actively searching for new wine related experiences.

4. Conclusion

Since Adega do Casal Manteiga has been in a partnership with ViniPortugal, the company noticed a rise in demand for their Villa Oeiras brand. The demand leads the company to expand their market internationally, one of them being the United States. When studying the demographics for the Carcavelos fortified wine, even though the significance of the survey results is low, a potential market was identified. The target market is gender neutral from the older Millennial generation. They have a higher education with a moderate to high household income. Their status tends to be either married or living with a significant other. They are frequent wine drinkers and occasionally consume fortified wines. They are enthusiastic about any wine related activity.

Carcavelos fortified wines have a potential to successfully launch in the United States as the market for Portuguese fortified wines is growing. Furthermore, as the Millennials under 21 grow older, the frequent and Enthusiast wine consumer segments have the potential to increase in number. Moreover, ethnicities such as Hispanics, whom preferred wine styles are dessert wines, are potential customers and they are a fast growing wine consumer segment. Though, fortified wines represent only 8% of the U.S. market and it is a hard style of wine to sell due to the lack of knowledge from the salespersons and the wine consumers. Meaning it is very important for the company to do further analyses on their demographics and to focus their marketing on the found niche. Furthermore, the Millennials are technology savvy meaning it is essential for the Villa Oeiras brand to be present online with an active and updated website and social media page. The company should use the platform to display their unique history, indigenous varieties, and wine making process. It would also be beneficial to have the possibility to purchase online. They should as well consider placing their bottles in wine and liquor stores as it is where Enthusiast wine consumers shop. So while the company do further analyses on its demographics in the U.S. market, they should boost the presence of their brand on a national level and on social media platforms.

4.1. Future perspectives

To further continue this study, there are many perspectives to consider that would be beneficial to the winery.

Continuing the market and demographic analyses would be important to obtain more significant results. There can be multiple analyses from different angles. One can study the similarities and differences of wine and fortified wine consumption in the 50 states of America. There can also be a focus on ethnic backgrounds, especially in the minority groups as they are predicted to grow in number and to become potential wine consumers. Analyzing the hard alcohol consumers, especially the ones aged in wood such as whiskey and brandies, could potentially attract consumers for Carcavelos fortified wines as they can find similar aromatic attributes.

Another perspective to increase the brand's success in the United States would be to study the various options for product launching along with market testing. Adding to launching a product, the company would need to analyze the esthetic of their bottle and make the appropriate changes to aim their targeted market better.

Lastly, the fortified wine market in the United States should be further analyzed. It would be interesting to know which products are being imported and to whom are they marketed too. This knowledge can be used by Adega do Casal Manteiga to find new markets and to identify its competitors.

Bibliographic references

Brager, D. (2015). *Wine trends or fads?* In: Proceedings of the Presentation at Unified Wine and Grape Symposium. 28 January 2015, Sacramento, CA.

Bruwer, J., Saliba, A., & Miller, B. (2011). *Consumer behavior and sensory preference differences: implications for wine product marketing*. *Journal of Consumer Marketing, 28*(1),5–18. doi: 10.1108/07363761111101903.

Clarke, Oz (1995). *Atlas Hachette Des Vins Du Monde*. *Hachette*. Pp 206.

Constellation Brands (2017). *Constellation brands reveals third phase of cutting edge consumer insights.* Retrieved October 8, 2017, from http://www.cbrands.com/news-media/constellation-brands-reveals-third-phase-cutting-edge-consumer-insights-study.

Fraga, H., Cortazar Atauri, I., Malheiro. A.C., Moutinho-Pereira, J., & Santos J.A. (2017) *Viticulture in Portugal: A review of recent trends and climate change projections*. *OENO One,* 51.2: 61. doi: 10.20870/oeno-one.2016.0.0.1621.

FranceAgriMer (2016). *Analyse des filières vitivinicoles des principaux pays producteurs dans le monde: Synthèse filière Etats-Unis.* December, 2016.

Frederickson, J. (2015). *State of the Industry*. In: Proceedings of the Presentation at Unified Wine and Grape Symposium. 28 January 2015, Sacramento, CA.

Gebeyaw, M. (2017). *Using MCA and variable clustering in R for insights in customer attribution. DataScience*. Retrieved October 12, 2017, from https://datascienceplus.com/using-mca-and-variable-clustering-in-r-for-insights-in-customer-attrition/.

Gillespie, J. (2010). *Wine Market Council's 2010 Consumer Tracking Study*. Presentation at Wine Market Council Seminar, Santa Rosa, CA, January 2010.

Gladstones, J.S. (2012). *Wine, terroir and climate change*. *Wakefield*. Pp 78.

Hersh, R. (2015). *Fortified wine sales, trends and challenges today. GuildSommAdmin.* January 28, 2015.

Hussein, M., Cholette, S., Castaldi, R. (2007). *Determinants of wine consumption of US consumers: an econometric analysis. International Journal of Wine Business Research* 19 (1), 49–62.

IVDP (2016). *Global statistics*. Retrieved from https://www.ivdp.pt/pagina.asp?codPag=73&codSeccao=6&idioma=1

IVV (1994). *Caderno de especificacoes – DO "Carcavelos". PDO-PT-A1462.*

IVV (2011a). *Analise estatistica do comercio internacional de vinho 2010 a 2016. Catalogo das castas para vinho cultivadas em Portugal.* Vol.1.

IVV (2011b). *Catalogo das castas para vinho cultivadas em Portugal*.

IVV (2017a). *Evolucao do consumo mundial de vinho – Serie 2000 a 2015.*

IVV (2017b). *Evolucao das exportacoes de vinho com DOP, vinho com IGP, vinho com destino a uma selecao de mercados*.

IVV (2017c). *Evolucao da producao serie 2000/2001 a 2016/2017.*

Kirschenmann, E. (2013). *Consumer wine trends: Americans drinking more, "better" wines. WineBusiness.* January 21, 2013.

Kleber (2009). *Millennial White Paper, The Newest Generation Dramatically Shifting the Consumer Landscape*. Retrieved on January 16, 2011, from /http://www.kleberandassociates.com/wp-content/uploads/2011/01/KAMillennialsWhitePaper.

Larousse (2017). *Sebastiao Jose de Carvalho e Melo 1er Marquis de Pombal*. Retrieved September 21, 2017 from http://www.larousse.fr/encyclopedie/personnage/Sebasti%C3%A3o_Jos%C3%A9_de_Carvalho_e_Melo_1_er_%EF%BF%BD_marquis_de_Pombal/138660.

Le, S., Josse, J., & Husson F. (2008). *FactoMineR : An R package for multivariate analysis. Journal of Statistical Software* 25.1.

McCann, S.E., Sempos, C., Freudenheim, J.L., Muti, P., Russell, M., Nochajski, T.H., ram, M., Hovey, K., & Trevisan. M. (2003). *Alcoholic beverage preference and characteristics of drinkers and nondrinkers in western New York (United States). Nutrition, Metabolism and Cardiovascular Diseases* 13:2-11.

Mendes, A. (2016). *Villa Oeiras: A segunda vida de um vinho generoso. DrinksDiary.* Retrieved October 5, 2017 from http://www.drinksdiary.com/villa-oeiras-a-segunda-vida-de-um-vinho-generoso/.

Municipio de Oeiras (2014). *Villa Oeiras, o nosso Carcavelos.* Retrieved September 23, 2017 from http://www.cm-oeiras.pt/pt/villaoeirasonossocarcavelos.

Nielson (2007). *US Millennials' Alcoholic Beverage Attitudes and Usage Studied*. Retrieved July 1, 2010 from /http://www.marketingcharts.com/television/us-millennial s-alcoholic-beverage-attitudes-and-usage-studied-2537/S.

Nielson (2016). *Nielson Spectra Research. The U.S. Wine Consumer*. Presentation by D. Brager at 11th Annual Wine Market Council Research Conference. New York, NY: Jan. 2016.

OIV (2017). *State of the Vitiviniculture World Market.* Retrieved on June 21, 2017 from www.oiv.int/public/medias5287/oiv-noteconjmars2017-en.pdf.

Penn, C. (2014). *Constellation segementation study outlines motivations, behaviors of today's wine consumer. WineBusiness.* Retrieved October 8, 2017 from https://www.winebusiness.com/news/?go=getArticle&dataid=134683.

Pew (2015). *Immigration's Impact on Past and Future U.S. Population Change*. *Pew Research Center* .Available at: ⟨http://www.pewhispanic.org/2015/09/ 28/chapter-2-immigrations-impact-on-past-and-future-u-s-population-change/⟩.

Quester, P.G., Smart, J. (1996). *Product involvement in consumer wine purchases: its demographic determinants and influence on choice attributes*. *International Journal Wine Marketing* 8(3). Pp 37–56.

Robinson, J., & Harding, J. (2015). *The Oxford Companion to Wine. Oxford University Press*. Pp 143.

Robinson, J., Harding, J., & Vouillamoz, J. (2012). *Wine grapes : A complete guide to 1,368 vine varieties, including their origins and flavours. HarperCollins, N.Y. Pp 52-53, 381, 1002.*

Ruben (2004). *Sherry sales: a (false) Renaissance?. Sherrynotes.com.* November 21, 2014.

Terras de Portugal (2017). *DOC Carcavelos*. Retrieved September 21, 2017, from http://www.terrasdeportugal.com/categoria-producto/doc-carcavelos.

Thach, L., & Olsen, J. (2015). *Profiling the high frequency wine consumer by price segmentation in the US market. Wine Economics and Policy* 4.1: 53-59.

Thach, L., MW, Chang, K. (2015). *2015 Survey of American wine consumer preferences. WineBusiness*. November 11, 2015.

U.S. Census (2010). *Quick Facts Table*. Retrieved from http://www.census.gov/quickfacts/table/PST045215/00headnote-js-b.

Velikova, N., & Dodd, T. (2016). *Sustainability of the wine market tough emerging consumer segments: The case of U.S. Hispanic consumers. Agriculture and Agricultural Science Procedia 8: 81-87.*

ViniPortugal. *International Promotion*. Retrieved July 12, 2017, from www.viniportugal.pt/InternationalPromotion.

Wine Institute (2014a). *Code of advertising standards*. Retrieved March 21, 2015 from http://www.wineinstitute.org/initiatives/issuesandpolicy/adcode/details.

Wine Institute (2014b). *Wine consumption in the US*. Retrieved February 8, 2015 from http://www.wineinstitute.org/resources/statistics/article86.

Wine Market Council (2015). *10th Annual Presentation of US Wine Consumer Trends*. 6 February 2015, Napa, CA.

Wine Market Council (2016). *Consumer research conference. Wine Business.* Wine communications group February 9, 2016.

Wines of Portugal (2017a). *Arinto*. Retrieved October 17, 2017, from http://www.winesofportugal.info/pagina.php?codNode=1092.

Wines of Portugal (2017b). *Harmonizacao com a casta Arinto.* Retrieved September 22, 2017, from http://www.winesofportugal.com/an/food-and-wine/grape-varieties/white/arinto-pedern

Wines of Portugal (2017c). *Lisboa.* Retrieved September 22, 2017 from http://www.winesofportugal.info/pagina.php?codNode=3901

Wines of Portugal (2017d). *Portugal wine exports to USA in 2015.* Retrieved June 21, 2017 from www.winesofportugal.com/us/press-room/statistics/performance-us/.

Annexe 1: Villa Oeiras survey for Garrafeira Nacional wine shop of Time Out market in Lisbon

Demographic survey for Villa Oeiras Carcavelos fortified wine

Dear consumer,

This anonymous survey is part of a master's thesis project that involves the distribution and sales of Carcavelos wines in the United States. The goal is to analyze the demographics for this wine.

I hope you enjoy your tasting,

Thank you for your time and honesty.

Part 1: Consumer identification - Fill in and circle the correct answer				
Country:			**State**:	
Gender: Female Male				
Age:				
Type of wine consumer	1/day	1/week	1/month	Special events
Type of fortified wine consumer	1/day	1/week	1/month	Special events

Part 2: Wine drinker category - Put an X in the box that suits you the most.	
	I believe you can buy good wine without spending a lot. So price is a top consideration.
	Wine drinking is part of my regular routine. When I find a brand I like, I will stick with it.
	I drink wine, but it does not play an important role in my life. I don't enjoy shopping for wine and find it complex and overwhelming.

	How others perceive me is important. I want to live a life that impresses others. I want to make sure the wine I choose says the right thing about me.
	I'm young and new to an intimidating category. Wine is a big part of the socializing I do. I'm interested in learning more.
	I love everything about the wine experience. I love researching purchases, reading reviews, shipping, discussing, drinking, sharing with others.

Part 3: Consumer's thoughts - Circle the right answer	
Global appreciation of the wine (1 = very bad, 10 = excellent)	1 2 3 4 5 6 7 8 9 10
Is the wine balanced	Yes No
Quality/price ratio	Too low Too high Perfect

Annexe 2: Villa Oeiras survey for Nice Way hostel in Cascais

Demographic survey for Villa Oeiras Carcavelos fortified wine

Dear wine consumer,

This survey is part of a master's thesis project that involves the distribution and sales of Villa Oeiras Carcavelos wines in the United States. The goal is to analyze the demographics for this wine. It should take less than 5 minutes to complete.

I hope you enjoy your tasting,

Thank you for your time and honesty.

<table>
<tr><td colspan="7">Part 1: Consumer identification - Fill in and circle the correct answer</td></tr>
<tr><td colspan="4">Country:</td><td colspan="3">State:</td></tr>
<tr><td colspan="7">Gender: Female Male</td></tr>
<tr><td colspan="7">Age:</td></tr>
<tr><td>Highest level of education you have completed?</td><td>Less than a high school degree</td><td>High school degree or equivalent (ex: GED)</td><td>Some college but no degree</td><td>Associate degree</td><td>Bachelor degree</td><td>Graduate degree</td></tr>
<tr><td>Type of wine consumer</td><td>1/day</td><td>1/week</td><td>1/month</td><td>Special events</td><td colspan="2">Never</td></tr>
<tr><td>Type of fortified wine consumer</td><td>1/day</td><td>1/week</td><td>1/month</td><td>Special events</td><td colspan="2">Never</td></tr>
</table>

<table>
<tr><td colspan="2">Part 2: Wine drinker category - Put an X in the box that suits you the most.</td></tr>
<tr><td></td><td>Price driven
I believe you can buy good wine without spending a lot.
So price is a top consideration.</td></tr>
</table>

	Everyday loyal Wine drinking is part of my regular routine. When I find a brand I like, I will stick with it.
	Overwhelmed I drink wine, but it does not play an important role in my life. I don’t enjoy shopping for wine and find it complex and overwhelming.
	Image seeker How others perceive me is important. I want to live a life that impresses others. I want to make sure the wine I choose says the right thing about me.
	Engaged newcomer I'm young and new to an intimidating category. Wine is a big part of the socializing I do. I'm interested in learning more.
	Enthusiast I love everything about the wine experience. I love researching purchases, reading reviews, shipping, discussing, drinking, sharing with others.

Part 3: Consumer’s thoughts - Circle the right answer	
Global appreciation of the wine (1 = very bad, 10 = excellent)	1 2 3 4 5 6 7 8 9 10
At what cost would you buy a 75cl bottle of this fortified wine? Under 20 € 20 – 30 € 30 – 40 € 40 – 50 € Over 50€	
Would you buy this fortified wine?	Yes No

Annexe 3: Villa Oeiras survey for SurveyMonkey

Dear wine consumer,

This survey is part of a master's thesis project that involves the distribution and sales of Villa Oeiras Carcavelos fortified wine (see picture below) in the United States. The goal is to analyze the demographics for this wine. Only consumers that are familiar with this wine should answer to this survey. It should take less than 5 minutes to complete.

Thank you for your time and honesty.

1. What is your global appreciation of Villa Oeiras Carcavelos fortified wine? (1 = very bad, 10 = excellent)

2. At what cost would you buy a 75 cl bottle of Villa Oeiras Carcavelos fortified wine?
   - Under 20€
   - 20-30€
   - 30-40€
   - 40-50€
   - Over 50€

3. How often do you drink fortified wines?
   - Every day
   - A few times per week
   - A few times per month
   - Only on special occasions
   - Never

4. How often do you drink wine?
   - Every day
   - A few times per week
   - A few times per month
   - Only on special occasions
   - Never

5. Which wine drinker profile do you identify with the most?
   - Price driven. I believe you can buy good wine without spending a lot. Price is a top consideration.
   - Every day loyal. Wine drinking is part of my regular routine. When I find a brand I like, I will stick with it.
   - Overwhelmed. I drink wine but it doesn't play in important role in my life. I don't enjoy shopping for wine; I find it complex and overwhelming.
   - Image seeker. How others perceive me is important. I want to like a life that impresses others. I want to make sure the wine I choose says the right thing about me.
   - Engaged Newcomer. I'm young and new to an intimidating category. Wine is a big part of the socializing I do. I'm interested in learning more.
   - Enthusiast. I love everything about the wine experience. I love researching purchases, reading reviews, discussing, drinking and sharing with others.

6. What is your gender?
   - Female
   - Male

7. How old are you?

8. What is the highest level of school you have completed or the highest degree you have received?
   - Less than high school degree
   - High school degree or equivalent (e.g., GED)
   - Some college but no degree
   - Associate degree
   - Bachelor degree
   - Graduate degree

9. In what country do you live? If you answered U.S.A., please specify which state.

Annexe 4: U.S. citizens survey for SurveyMonkey

Hello,

This survey is part of a master's thesis project that involves finding the demographics for dessert wine (also known as fortified wine) consumption in the United States. This survey is **ONLY aimed towards U.S. citizens**. It will take approximately **3 minutes to fill out** this survey. Please answer the following questions truthfully.

When you are done, please pass on this survey.
Thank you for your time and honesty.

10. How often do you drink wine?
    - Every day
    - A few times per week
    - A few times per month
    - Only on special occasions
    - Never

11. How often do you drink dessert wines? (ex: Port, Sherry, Moscatel, etc…)
    - Every day
    - A few times per week
    - A few times per month
    - Only on special occasions
    - Never

12. Which wine drinker profile do you identify with the most? (You can only choose one)
    - I am price driven. I believe you can buy good wine without spending a lot. Price is a top consideration.
    - I'm an everyday loyal. Wine drinking is part of my regular routine. When I find a brand I like, I will stick with it.
    - I'm overwhelmed. I drink wine but it doesn't play in important role in my life. I don't enjoy shopping for wine; I find it complex and overwhelming.
    - I'm an image seeker. How others perceive me is important. I want to like a life that impresses others. I want to make sure the wine I choose says the right thing about me.
    - I'm an engaged newcomer. I'm young and new to an intimidating category. Wine is a big part of the socializing I do. I'm interested in learning more.
    - I'm an enthusiast. I love everything about the wine experience. I love researching purchases, reading reviews, discussing, drinking and sharing with others.
    - I do not associate myself with any of the above choices
    - None of the above. I do not consume wine.

13. What is your gender?
    - Female
    - Male

14. What is the highest level of school you have completed or the highest degree you have received?
    - Less than high school degree
    - High school degree or equivalent (e.g., GED)
    - Some college but no degree
    - Associate degree
    - Bachelor degree
    - Graduate degree
    - I prefer not to answer this question

15. Which of the following best describes your current relationship status?
    - Single, never married
    - Single, but cohabiting with a significant other
    - In a domestic partnership or civil union
    - Married
    - Widowed
    - Divorced
    - Separated
    - I prefer not to answer this question

16. How old are you?

17. What is your approximate average household income?
    - Less than high 20 000$
    - 20 000$ - 34 999$
    - 35 000$ - 49 999$
    - 50 000 – 74 999$
    - 75 000$ - 99 999$
    - Over 100 000$
    - I prefer not to answer this question

18. What state do you reside in?

Annexe 5: Data results from Villa Oeiras surveys

Candidates	Country	State	Gender	Age	Status	Wine consumption	Fortified wine consumption	Wine drinker profile	Global appreciation of the wine	Would you buy this fortified wine	Quality/ price ratio	From
1	Brazil		Male	48	Married	1/day	1/week	Image seeker	10	Yes	Perfect	Garrafeira Nacional
2	USA		Male	39	Single	1/week	Special events	Engaged newcomer	7	Yes	Perfect	
3	UK		Female	41	Single	1/day	Special events	Overwhelmed	6	Yes	Perfect	
4	Spain		Female	24	Single	Special events	Special events	Overwhelmed	5	Yes	Too high	
5	France		Female	31	Single	1/day	1/day	Enthusiast	7	Yes	Perfect	
6	UK		Female	37	Married	1/day	1/week	Enthusiast	9	Yes	Too low	
7	Germany		Male	20	Single	Special events	Special events	Engaged newcomer	6	Yes	Too high	
8	Portugal		Male		Single	1/day	Special events	Everyday loyal	5	Yes	Perfect	
9	Spain		Male	56	Married	1/day	Special events	Price driven	10	Yes	Too high	
10	Spain		Female	57	Married	1/day	Special events	Price driven	10	Yes	Too high	
11	Portugal		Male	27	Single	1/week	1/month	Enthusiast	8	Yes	Perfect	
12	Portugal		Male	34	Single	1/week	Special events	Image seeker	6	Yes	Perfect	
13	Italy		Female	28	Single	1/month	Special events	Engaged newcomer	6	Yes	Too high	
14	Italy		Female	32	Single	Special events	Special events	Overwhelmed	6	Yes	Too high	
15	Brazil		Male	56	Married	1/day	1/week		7	Yes	Perfect	
16	Germany		Male	56	Married	1/day	1/week		7	Yes	Perfect	

17	USA	Florida	Male	56		1/week	1/week	Everyday loyal	8	Yes	Perfect	

Candidates	Country	State	Gender	Age	Education	Wine consumption	Fortified wine consumption	Wine drinker profile	Global appreciation of the wine	At what cost would you buy this wine?	From
38	Portugal		Male	36	Graduate degree	Every day	A few times per month	Enthusiast	7.5	20-30	Survey Monkey
39	Portugal		Female	23	Bachelor degree	A few times per week	A few times per month	Engaged newcomer	8	20-30	
40	Portugal		Female	45	Graduate degree	A few times per week	A few times per month	Price driven	9	Under 20	
41	India		Male	28	Graduate degree	Every day	Only on special occasions	Enthusiast	6.5	30-40	
42	Hungary		Male	30	Graduate degree	Every day	Only on special occasions	Enthusiast	9.8	Over 50	
43	Italy		Male	25	Graduate degree	Every day	Never	Enthusiast	4	20-30	
44	Italy		Male	34	Graduate degree	Every day	A few times per month	Enthusiast	5.6	Under 20	
45	USA	Michigan	Male	64	Graduate degree	A few times per week	A few times per month	Enthusiast	10	30-40	
46	Angola		Male	33	Graduate degree	A few times per week	A few times per month	Enthusiast	6.5	Over 50	
47	Italy		Male	25	Graduate degree	A few times per week	Only on special occasions	Enthusiast	8	20-30	
48	USA	Michigan	Female	60	Some college but no degree	Every day	A few times per month	Everyday loyal	9.9	40-50	
49	USA	Michigan	Male	60	Graduate degree	Every day	Only on special occasions	Enthusiast	9.8	Over 50	

Candidates	Country	Gender	Age	Education	Wine consumption	Fortified wine consumption	Wine drinker profile	Global appreciation of the wine	At what cost would you buy this wine?	Would you buy this fortified wine	From
18	Italy	Male	20	Bachelor degree	1/week	1/day	Overwhelmed	8	20-30	Yes	Nice Way hostel
19	Italy	Female	20	Bachelor degree	1/week	1/month	Overwhelmed	9	20-30	Yes	
20	Norway	Female	19	Some college but no degree	1/week		Engaged newcomer	6	Under 20	No	
21	Norway	Female	21	Some college but no degree	1/week	Special events	Engaged newcomer	9	Under 20	No	
22	Norway	Female	21		1/week	1/week	Price driven	6	Under 20	Yes	
23	Canada	Male	27	Graduate degree	1/week	Special events	Price driven	10	20-30	Yes	
24	Canada	Female	22	Bachelor degree	1/week	Special events	Price driven	8	Under 20	Yes	
25	Angola	Female	24	Bachelor degree	1/day	1/week	Everyday loyal	9	Under 20	Yes	
26	Portugal	Female		Bachelor degree	Special events	1/month	Overwhelmed	10	20-30	Yes	
27	Portugal	Male	28	Bachelor degree	1/week	Special events	Price driven	8	Under 20	Yes	
28	Ireland	Male	24	Bachelor degree	1/month	Special events	Engaged newcomer	7	20-30	Yes	
29	Sweden	Female	23	Some college but no degree	1/week	Never	Overwhelmed	5	Under 20	No	
30	Brazil	Female	53	Bachelor degree	Special events	1/week	Enthusiast	9	20-30	No	
31	Germany	Male	31	Graduate	1/week	Never	Everyday loyal	7	20-30	No	

				degree							
32	Germany	Female	26	Bachelor degree	1/week	Never	Overwhelmed	7	Under 20	No	
33	Germany	Female	27	Graduate degree	1/week	Never	Overwhelmed	7	Under 20	No	
34	Germany	Male	29	Graduate degree	1/week	Never	Overwhelmed	7	20-30	Yes	
35	Italy	Male	22		1/day	Special events	Price driven	7	Under 20	No	
36	Spain	Male	22	Graduate degree	1/week	Special events		8	Under 20	Yes	
37	Switzerland	Male	24	Associate degree				7.5	20-30		

Annexe 6: Data results from U.S. citizens surveys

Participants	Wine consumption	Fortified wine consumption	Wine drinker profile	Gender	Education	Status	Age	Income	State
1	Every day	A few times/week	Every day Loyal	Female	Bachelor degree	Married	59	Over 100000	Florida
2	Never	Never	None of the above	Female	Bachelor degree	Single, never married	25	Over 100000	Texas
3	Only on special occasions	Never	None of the above	Female	Bachelor degree	Single but cohabiting with a significant other	25	75000-99999	Florida
4	Every day	Only on special occasions	Price Driven	Female	Some college but no degree	Single but cohabiting with a significant other	62	50000-74999	New York
5	A few times/week	Only on special occasions	Price Driven	Female	Bachelor degree	In a domestic partnership or civil union	27	75000-99999	Maine
6	Every day	A few times/month	Enthusiast	Male	Graduate degree	Single, never married	24	50000-74999	California
7	A few times/week	Only on special occasions	Enthusiast	Female	Bachelor degree	Single, never married	35	20000-34999	Washington
8	A few times/month	Never	Enthusiast	Female	Bachelor degree	Single but cohabiting with a significant other	25	Over 100000	California
9	A few times/week	Only on special occasions	Overwhelmed	Female	Some college but no degree	Married	44	75000-99999	Georgia

10	A few times/month	Only on special occasions	Price Driven	Male	Graduate degree	Single but cohabiting with a significant other	27	20000-34999	Connecticut
11	Only on special occasions	Only on special occasions	Overwhelmed	Female	Graduate degree	Single but cohabiting with a significant other	25	50000-74999	Maryland
12	Every day	Never	Enthusiast	Female	Bachelor degree	Single but cohabiting with a significant other	28	50000-74999	California
13	Every day	Only on special occasions	Enthusiast	Female	Bachelor degree	Single, never married	27	35000-49999	California
14	Every day	A few times/month	Image seeker	Male	Some college but no degree	Separated	34	75000-99999	Connecticut
15	A few times/month	Only on special occasions	Enthusiast	Female	Associate degree	Married	50	50000-74999	Oregon
16	A few times/week	Only on special occasions	Price Driven	Female	Bachelor degree	Single, never married	24	Less than 20000	New York
17	A few times/week	A few times/month	Enthusiast	Female	Graduate degree	Married	71	Over 100000	Florida
18	Every day	Only on special occasions	Enthusiast	Male	Graduate degree	Married	48	75000-99999	Oregon
19	A few times/month	A few times/month	Enthusiast	Female	Bachelor degree	Married	50	NA	New Jersey
20	A few times/month	A few times/week	Every day Loyal	Male	Bachelor degree	NA	28	35000-49999	Georgia

21	A few times/week	Only on special occasions	Enthusiast	Female	Bachelor degree	Widowed	68	50000-74999	New Jersey
22	Every day	Only on special occasions	Enthusiast	Male	Associate degree	Married	69	Over 100000	Michigan
23	A few times/week	Only on special occasions	Enthusiast	Male	Bachelor degree	Married	71	75000-99999	New Jersey
24	A few times/month	A few times/month	Overwhelmed	Male	Bachelor degree	Single, never married	24	35000-49999	New York
25	A few times/week	Only on special occasions	Price Driven	Female	Some college but no degree	Single, never married	24	Less than 20000	Oregon
26	A few times/week	Only on special occasions	Engaged Newcomer	Female	Bachelor degree	Single, never married	23	Less than 20000	California
27	Every day	A few times/month	Enthusiast	Male	Graduate degree	Divorced	66	Over 100000	New Jersey
28	Only on special occasions	Never	Engaged Newcomer	Male	Bachelor degree	Single, never married	22	NA	New York
29	Every day	Only on special occasions	Enthusiast	Female	Graduate degree	Married	60	Over 100000	New Jersey
30	A few times/week	Only on special occasions	Every day Loyal	Female	Graduate degree	Single, never married	26	Less than 20000	Illinois
31	Every day	Only on special occasions	Enthusiast	Male	Some college but no degree	Married	35	35000-49999	Oregon
32	A few times/week	Only on special occasions	Enthusiast	Male	Bachelor degree	Single, never married	32	20000-34999	New Jersey

33	Every day	Only on special occasions	Enthusiast	Male	Some college but no degree	Single but cohabiting with a significant other	33	35000-49999	Montana
34	A few times/week	Only on special occasions	Engaged Newcomer	Female	Bachelor degree	Single, never married	23	20000-34999	California
35	Every day	Only on special occasions	Engaged Newcomer	Male	Bachelor degree	Single, never married	25	20000-34999	New York
36	A few times/week	Never	Engaged Newcomer	Male	Bachelor degree	Single, never married	26	20000-34999	California
37	Every day	Only on special occasions	Enthusiast	Female	Bachelor degree	Married	57	Over 100000	Kansas
38	A few times/week	A few times/month	Image seeker	Male	Bachelor degree	Single, never married	24	50000-74999	New York
39	A few times/week	A few times/month	Enthusiast	Male	Graduate degree	Married	54	Over 100000	Missouri
40	Only on special occasions	Only on special occasions	Overwhelmed	Male	High school degree or equivalent	In a domestic partnership or civil union	23	Less than 20000	Maine
41	Only on special occasions	Only on special occasions		Female	High school degree or equivalent	Single, never married	40	50000-74999	New York